DOCUMENT RESUME

ED 346 876 IR 054 095

AUTHOR Watt, Michael G.
TITLE Instructional Materials in Australian Education: A Review and Annotated Bibliography of Research.
PUB DATE 91
NOTE 114p.; Master's Thesis, University of Tasmania. For a related review, see ED 338 212.
PUB TYPE Dissertations/Theses - Masters Theses (042) -- Information Analyses (070) -- Reference Materials - Bibliographies (131)

EDRS PRICE MF01/PC05 Plus Postage.
DESCRIPTORS Annotated Bibliographies; Censorship; Comparative Analysis; Controversial Issues (Course Content); Curriculum Development; *Educational Change; *Educational Research; Elementary Secondary Education; Females; Foreign Countries; Government Role; Higher Education; *Instructional Material Evaluation; *Instructional Materials; Intellectual Disciplines; Minority Groups; Publishing Industry; *Textbook Research
IDENTIFIERS *Australia; United States

ABSTRACT

This documents reviews books, general collected works, reports, and journal articles published since 1975 on research about selected aspects of instructional materials and their relationship to teaching and learning and educational decision-making in the context of curriculum reform in Australian education. The introductory review has two main aims: to analyze the findings in each of the selected aspects; and to compare the findings of the Australian research with American research reported in "Textbooks in School and Society: An Annotated Bibliography and Guide" by Arthur Woodward, David Elliott, and Kathleen Nagel. This annotated bibliography contains some 300 individual reviews identified from searches of 9 standard references: "Australian Education Index"; "Education Guidelines"; "Australian Curriculum Information Network"; "Multicultural Australian Information System"; "National TAFE Clearinghouse Information Network"; "Edline" (Victoria Ministry of Education); "Current Index to Journals in Education" (ERIC); "Education Index" (H. W. Wilson Co.); and the "British Education Index." Both the review and annotated bibliography are organized according to 11 selected aspects: (1) use and curriculum role; (2) selection; (3) the publishing industry; (4) innovation and reform efforts; (5) general references to evaluation and criticism; (6) readability; (7) treatment of minorities and women; (8) subject matter content coverage in language arts, mathematics, reading, science, and social studies; (9) ideology in instructional materials; (10) controversy and censorship; and (11) evolution and creationism. A list of journals published in Australia and the United States is included, and a bibliography, author index, and subject index are appended. (Author/BBM)

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Instructional Materials in Australian Education

A Review and Annotated Bibliography of Research

Michael G. Watt

IR054095

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Submitted in partial fulfilment of the requirements for the Master of Education (Qualifying) degree at the University of Tasmania.

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INSTRUCTIONAL MATERIALS IN AUSTRALIAN EDUCATION: A REVIEW AND ANNOTATED BIBLIOGRAPHY OF RESEARCH

ABSTRACT

This document reviews books, general collected works, reports and journal articles published since 1975 on research about selected aspects of instructional materials, their relationship to teaching and learning and educational decision-making in the context of curriculum reform in Australian education. The introductory review has two main aims: to analyse the findings of research in each of the selected aspects; and to compare the findings of the Australian research with American research reported in *Textbooks in School and Society: An Annotated Bibliography and Guide* by Arthur Woodward, David Elliott and Kathleen Nagel, and subsequently reviewed in *Textbooks and Schooling in the United States* edited by David Elliott and Arthur Woodward. This annotated bibliography contains some 300 individual reviews identified from searches of the *Australian Education Index* of the Australian Council for Educational Research, the *Education Guidelines* of Bibliographic Services, the *Australian Curriculum Information Network* of the Curriculum Corporation, the *Multicultural Australia Information System* of the Office of Multicultural Affairs, the *National TAFE Clearinghouse Information Network* of the TAFE National Centre for Research and Development, *Edline* of the Victoria Ministry of Education, the *Current Index to Journals in Education* of ERIC, the *Education Index* of H.W. Wilson Co. and the *British Education Index*. Both the review and annotated bibliography are organised according to eleven selected aspects: use and curriculum role; selection; the publishing industry; innovation and reform efforts; general references to evaluation and criticism; readability; treatment of minorities and women; subject matter content coverage in language arts, mathematics, reading, science and social studies; ideology in instructional materials; controversy and censorship; and evolution and creationism. A bibliography, author index and subject index are appended.

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1. INSTRUCTIONAL MATERIALS IN AUSTRALIAN SCHOOLS: A TOPIC FOR RESEARCH

School books have played an important part in classrooms of Australian schools since the colonial period of European settlement. The first school books, published in Australia during the mid-nineteenth century, were basal readers. The most widely used readers in Australian schools during the late nineteenth century, however, were adaptations of a series produced by the Irish National Board of Education. These were replaced by *The New Australian Series*, first published during the 1890s, because their content was recognisably Australian. James Bonwick, an inspector of denominational schools in Victoria, was the first notable Australian author of textbooks, which he wrote for all subject areas during the late nineteenth century. Although his textbooks were used widely, most readers and textbooks used in Australian schools at that time were imported from Britain.

The number of Australian authors of textbooks increased markedly from the last decade of the nineteenth century. They wrote textbooks for all subject areas, but these were only aimed at the primary level. The introduction of secondary education during the early decades of this century led to an extension of textbook publishing in Australia to cater for this level. The content of Australian textbooks during the inter-war years reflected increasingly the curricula implemented by state education departments. The earlier, slender textbooks published in Australia gave way to more substantial ones, which incorporated new educational theories and advances in knowledge. In spite of these developments, most textbooks used in Australian schools until World War II continued to be imported from Britain.

The use of imported textbooks in Australian schools continued during the post-war period, although the main source shifted to the United States. An important consequence of curriculum reforms, occurring in state education systems in Australia during the late 1960s and 1970s, was the recognition that a national agency was needed so that instructional materials could be published that met the requirements of these reforms. Founded in 1973, the Curriculum Development Centre became an important developer and publisher of a wide variety of instructional materials, thereby increasing the proportion of Australian publications used in schools. A more recent agenda for educational reform during the late 1980s led to the restructuring of national educational agencies, including the replacement of the Curriculum Development Centre by the Curriculum Corporation. The intent of the Curriculum Corporation is to coordinate activities for researching, developing and implementing a common curriculum framework for Australian schools, which includes the development and publication of curriculum materials associated with such collaboration. The involvement of a national agency, supported by the educational community, has been an important supplement during the last two decades to the function of commercial publishers in providing instructional materials.

General references to the history of Australian education during the nineteenth and twentieth centuries give scant attention to the part played by instructional materials in the educational process. Research and commentary on the topic has only appeared recently; Bryant (1980) investigated changes occurring in teaching and learning methods and curriculum materials used in geography programs in Victoria between 1850 and 1910, Polya (1986) examined textbooks used in science programs in Australian schools between 1850 and 1939, and Clarke (1986) examined Australian content contained in syllabuses, textbooks and teachers' guides used in Queensland schools between 1860 and 1970.

Little attention also appears to have been paid in the reports of governmental departments in Australia to the instructional materials used in schools. The Department of the Media (1974) issued a report of an inquiry into the production and dissemination of instructional materials to primary, secondary and higher education levels. The report made several recommendations, including involving the Curriculum Development Centre in coordinating the dissemination of instructional materials and producing materials for minority groups, abolishing closed market practices in commercial publishing which hindered the importation of instructional materials from the United States, and arranging to produce locally imported materials for which there was a substantial market in Australia. More recently, the House of Representatives Standing Committee on Employment, Education and Training of the Australia Parliament (1989) reported on how the new computer technologies could be applied to the production and dissemination of instructional materials to all levels of Australian education. The Committee recommended that the Australian Education Council should be responsible for coordinating a national effort, in which information databases on higher education programs and courseware be developed to serve all institutions, culturally appropriate instructional materials be produced for Aboriginal Australians, inservice training in educational technology be promoted, an agency be established to coordinate research on the use of educational technology, and the use of television and radio for broadcasting educational programs be extended.

The research annotated in this bibliography, however, shows that researchers are now giving more attention to specific issues relating to instructional materials. This has apparently occurred, in spite of the lack of recognition by educational authorities in Australia that instructional materials are important elements in any effort to reform education. This is evidenced in recent reforms by state education departments in Australia, which have not sought as part of accomplishing curriculum reform to define the role of instructional materials in the curriculum or to demand improvements in their quality, but rather to redefine curriculum options to meet the needs of a changing student population.

The review of research annotated in this bibliography emphasises comparison with a similar body of research published by American scholars. In some cases, similarities between aspects of research in the United States and Australia are identified by this comparison, whilst in other cases, there are evident differences. The intent of such comparison is to identify where research in Australia can be

applied more effectively to improve various problems inherent within instructional materials, especially in the context of their use in classrooms.

2. STRUCTURE OF THE REVIEW AND BIBLIOGRAPHY

1 Purpose

This bibliography arose from a review of *Textbooks in School and Society: An Annotated Bibliography and Guide* by Arthur Woodward, David Elliott and Kathleen Nagel, and the subsequent analysis of this research and the review of the role of the textbook in contemporary curriculum reform in the United States of America presented in *Textbooks and Schooling in the United States*, edited by David Elliott and Arthur Woodward. Their bibliography and guide is intended as a reference for researchers and educators interested in the most significant contributions to our knowledge about textbooks. This bibliography is intended to draw upon a similar audience, although it will be of particular interest to Australian researchers and educators.

The purpose of the review is to analyse a sample of research literature on aspects of instructional materials and their relationship to education in Australia. The analysis has five objectives: to analyse the findings of research in each of these aspects; to compare the findings of the Australian research with the American research annotated by Woodward et al. (1988); to determine the extent of research about aspects relating to instructional materials in past and present activities for curriculum reform; to evaluate the quality of research in the area of managing information on instructional materials; and to identify the roles of national educational agencies, state education departments and the commercial publishing industry in each aspect.

2 Subject and Scope

In their bibliography, Woodward et al. cited references to research literature on aspects of textbooks, their relationship to the curriculum and policy-making in the programs of American schools. The design of their bibliography reflects a concern with issues relating to textbooks that have become topical in American education, such as instructional design, content coverage and accuracy, selection standards and adoption practices, and censorship.

In some cases, these aspects also form topical issues concerning the use of instructional materials in Australian schools, whilst in other cases, they are less evidently matters of concern. In spite of these differences, these aspects form convenient topics to classify research literature on instructional materials. For this reason, the author has adhered to the original classification used by Woodward et al., whilst making some minor modifications in their wordings. These revisions were necessitated by a deliberate extension of the subject matter within the bibliography to include information on publications describing not only textbooks but other media of instructional materials.

The scope of this bibliography, however, varies in several important details from *Textbooks in School and Society*. Firstly, only descriptions of books, general

collected works, reports and journal articles have been included in this bibliography, whereas Woodward et al. extended their bibliography to cover other printed publications, such as newspaper articles. Secondly, this bibliography includes only works published by Australian and foreign authors in publications published in Australia and works published by Australian authors in foreign publications, whereas Woodward et al. included significant contributions from other English-speaking countries as well as the United States. Thirdly, the author has sought to represent a comprehensive rather than a selective coverage of works published since 1975. This was possible because considerably fewer Australian than American works had been published during this period. Because they included within their bibliography noteworthy historical items published before 1975, Woodward et al. were able to compare the concerns that authors of the earlier period held to those of current writers. It would be valuable to draw a comparison between this historical research and a similar contribution in Australia. Although this has not been attempted within this bibliography, it would form a useful area for further research.

3 Format

Entries are arranged into subject sections as outlined in the Contents' page. Within each section, entries are arranged in alphabetical order according to the authors' names.

Two sample entries, the first a collected work and the second a journal article, are shown below as examples to illustrate and explain the types of information typically provided in an entry. Each numbered section in the sample designates an item of information that might be included in an entry. These are explained in the corresponding paragraph below, identified by the same number.

(i) 151
(ii) Fraser, B.J.
(iii) 'External summative evaluation of Australian Science Education Project'
(iv) In Fraser, B.C., *Case Studies in Curriculum Evaluation*
(v) (Australian Case Studies in Curriculum Series)
(vi) Bentley, WA: West Australian Social Science Education Consortium, 39-66 (1985)
(vii) Reviews research on evaluative studies into five aspects of ASEP: its purpose; the content analysis of ASEP materials; the learning environment in which ASEP materials are used; learning outcomes; and the processes for disseminating ASEP materials.

(i) Reference Number: The number, referencing the entry for citation in the Index, is given. The entries in the bibliography are numbered sequentially.

(ii) Name of Author: The name or names of the authors of the article are given.

(iii) Title of Article: The title of the article in a collected work is given.

(iv) Author and Title of Collected Work: The author and title of the collected work is given in which the article is located.

(v) Title of Series: The title of the series, supervised by a common general editor, is given to which the collected work belongs.

(vi) Place of Publication and Publisher: The place and state, in which the collected work was

published, are given, followed by the name of the publisher. The page numbers on which the article can be found in the collected work, and the publication date completes this information.

(vii) Abstract: The abstract, providing a brief description of the article, is given.

(i) 271
(ii) Freebody, P. and Baker, C.D.
(iii) 'Children's first schoolbooks: introductions to culture of literacy'
(iv) *Harvard Educational Review*, 55: 4, 381-398 (1985)
(v) Reports the results of a content analysis of a sample of basal and supplementary materials for beginning readers used in New South Wales schools, and discusses ways in which beginning reading materials present cultural perspectives to young children.

(i) Reference Number: The number, referencing the entry for citation in the Index, is given. The entries in the bibliography are numbered sequentially.

(ii) Name of Author: The name or names of the authors are given.

(iii) Title of Article: The title of the article is given.

(iv) Title of Periodical: The title of the periodical is given in which the article is located. This is followed by the volume, number and the page numbers on which the article can be found in the periodical. The publication date for the article completes this information.

(v) Abstract: The abstract, providing a brief description of the article, is given.

4 Sources and Method

The target population comprised works indexed in nine standard references. The search in the *Australian Education Index* compiled by the Australian Council for Educational Research at Hawthorn, Victoria, included the period between January 1975 and June 1990. The search in the *Education Guidelines* compiled by Bibliographic Services at Mt. Waverley, Victoria, included the period between 1979 and 1990. The search in the *Australian Curriculum Information Network* compiled by the Curriculum Corporation at Carlton South, Victoria, covered all records in this database to August 1991. The search in the *Multicultural Australia Information System* compiled by the Office of Multicultural Affairs, Department of the Prime Minister and Cabinet at Canberra, A.C.T., covered all records in this database to August 1991. The search in the *National TAFE Clearinghouse Information Network* compiled by the TAFE National Centre for Research and Development at Leabrook, South Australia, covered all records in this database to August 1991. The search in *Edline* compiled by the Victoria Ministry of Education at Melbourne, Victoria, covered all records in this database to August 1991. The search in the *Education Index* compiled by the H.W. Wilson Company, Bronx, New York, included the period between July 1974 and November 1990 and was undertaken by identifying relevant articles under the descriptor, textbooks. The search in the *Current Index to Journals in Education* compiled by the Educational Resources Information Center, United States Department of Education, Washington, D.C., included the period between January 1975 and December 1990, and was undertaken by identifying relevant articles listed under the subject index title, Australia. The search in the *British Education Index* compiled at the Brotherton Library in the University of Leeds, included the

period between January 1975 and September 1990, and was undertaken by identifying relevant articles under two subject list titles: Australia; and textbooks.

3. REVIEW OF THE TOPICS

1 Producers and Consumers

1.1 Instructional Materials and School Programs

1.1.1 Use and Curriculum Role

Woodward et al. (1988) viewed recent research into the use and curriculum role of textbooks in American schools to be a response to the two main dimensions of the movement for educational reform during the 1980s. They related the first, initiatives to increase the level of student achievement, to the dependence of students upon textbooks, and the second, initiatives to strengthen professional control, to the reliance of teachers upon textbooks. The rationale for researching into the use and curriculum role of textbooks lies in determining the extent to which students and teachers depend upon textbooks, because the quality of textbooks affects the quality of teaching and learning in classrooms.

They identified several significant research reports from early this century to recent times supporting the contention that both students and teachers depend upon textbooks. Bagley (1931) reported a survey on textbook dependence, conducted for the National Society for the Study of Education, in which a high proportion of 539 lessons observed involved the use of a single textbook. Gross (1952) reported from a survey of secondary teachers in California that 79% used a single textbook extensively. The Educational Products Information Exchange Institute (1977) conducted the National Survey and Assessment of Instructional Materials (NSAIM) during 1974 and 1975, in which baseline data were gathered from a nationally stratified sample of more than 12,000 teachers. It was found that instructional materials were used between 90% and 95% of instructional time, which included the use of textbooks for 70% of instructional time. More recently, Shannon (1982) reported from a survey of teachers and administrators that, whilst the latter believed in the authority of textbook content, the former relied upon textbooks because of perceived demands by administrators. In testing a model of reading programs derived from this evidence, Shannon (1983) found that reading instruction was standardised by the use of basal readers and objective testing. From an interpretation of data for the National Assessment of Educational Progress, LaPointe (1986) reported that 95% of teachers use textbooks daily, 90% are satisfied with these instructional materials and 87% use tests included in textbooks.

As a corollary to the research examining teacher reliance upon textbooks, Woodward et al. identified a second area involving investigation into the effect that teacher's guides to textbook programs have upon teacher decision-making. McCutcheon (1981) reported research showing that between 85% and 90% of reading and mathematics activities in teachers' planning are based upon suggestions presented in teacher's guides. Woodward (1986) argued that the role of the teacher has changed from a professional to a manager in the 1970s, by inferring from the findings of a study of basal reading series teacher's guides that

recent guides present detailed lesson plans for teachers to follow. Duffy et al. (1987) argued that instructional decision-making is impeded by administrative requirements that teachers conform to procedures specified in teacher's guides to basal reading textbooks.

Woodward and Elliott (1990a) interpreted teachers' dependence, rather than their use of textbooks, as being a central issue in professional practice. They define dependence as an unquestioning acceptance and following of the curriculum presented in textbooks. The research studies suggest that the factors of experience, subject matter expertise, the amount of time allocated for instruction, and teachers' perceptions of the authority of textbooks may explain why they depend, use or are independent of textbooks. The same body of research also indicates that an overwhelming majority of teachers would recommend particular materials without reservations in spite of other research studies casting doubt upon the quality of textbooks as curriculum materials. Such findings lead Woodward and Elliott to conclude that the majority of American teachers depend upon textbooks rather than use them selectively.

It is apparent that the scope of research studies into the use of instructional materials in Australian schools has not focused upon the issue of student or teacher dependence upon instructional materials. Studies into the use of instructional materials in Australian schools are only reported in five large-scale projects: Anderson (1981: item 001), and Education News (1981: item 008) reported the use of materials for English as a second language in New South Wales, Victoria and South Australia; Brown et al. (1982: item 003) investigated the use of instructional materials in technical and further education in South Australia, Tasmania and Victoria; Marsh (1984: item 018), and Marsh et al. (1981: item 020; and 1985: item 021) reported a study surveying teachers' perceptions of the patterns of dissemination and use of instructional materials in Western Australian schools; Marsh and Kennedy (1989: item 019) investigated the use of materials for English as a second language in all Australian states and territories; and the Tasmania Department of Education (1990: item 027) investigated the use of instructional materials in Tasmanian schools during 1985 and 1986. To this body of research, a number of studies conducted in relation to the Australian Science Education Project (ASEP) and the Social Education Materials Project (SEMP) should also be considered in respect to this discussion.

These research studies present a common purpose; they focus upon identifying patterns whereby instructional materials are disseminated to schools, managed within schools and used in classrooms, rather than determining the extent to which groups of teachers depend upon, use or are independent of instructional materials. An explanation for the implicit rationale and designs applied in these research studies should be sought in processes devised during the period of the Australian Science Education Project (ASEP) and the Social Education Materials Project (SEMP) as means of verifying their success. It is evident that alternative research designs now need to be employed to collect data from teachers and students upon which interpretations can be made into their relative dependence, use or independence of instructional materials.

1.1.2 Selection

Woodward et al. (1988) indicated that the large quantity of research, identifying flaws in the prevailing processes for textbook selections, reflects the national concern in the United States to determine a valid textbook selection process. They identified that this research has been directed to three main topics: the lack of uniformity among states in their textbook selection processes (Farr and Tulley, 1985; Keith, 1985; Lang, 1985; Rosencranz, 1985; Tulley and Farr, 1985; and Tyson-Bernstein and Woodward, 1986); the influence that the largest state-wide adoption states have upon marketing of textbooks by publishers (Crane, 1975; Bowler, 1978; English, 1980; and Schomburg, 1986); and the recommended steps to be used for textbook selections, such as the use of two committees or subcommittees in the selection process (DeRose and Whittle, 1976; and Winograd and Osborn, 1985), the use of in-service training materials (Osborn and Stein, 1985; and Dole et al., 1987), and the use of a variety of evaluative techniques (Beattie, 1966; Eash et al., 1975; Leonard and Lowery, 1976; Ney, 1982; and Muther, 1984). They indicated that another body of research investigates the decision-making groups and processes operating within textbook adoption committees (Finley, 1979; Clary and Smith, 1986; Fitzgibbons, 1985; and Miller, 1986). This research has identified that professional groups, teachers, administrators and subject specialists play crucial roles.

Tulley and Farr (1990) identified four issues that require further inquiry in order to improve the policies and processes for selecting textbooks used in American schools. First, there is a need to determine how procedures used in selecting textbooks can be made more reliable and valid. Some research has already been initiated into analysing these procedures (Guenther and Hansen, 1977; Exline, 1984; and Powell, 1985). Second, there needs to be investigation, further extension to that pioneered by Farr et al. (1983), into the dynamics of relationships between various interest groups involved in decision-making during textbook selections. Third, the activities that precede and follow the selection of textbooks need investigation. These activities include investigating how individuals organise and prepare for selection committees, and how they implement new textbooks in classrooms. Finally, researchers need to extend understanding about which level, whether teachers, school or district committees, makes the most effective decisions on textbook selections.

Whereas policies were enacted during the late nineteenth century in the United States for selecting textbooks by way of adoption committees at either the district- or state-level as a means of controlling the content of the curriculum, such control was accomplished in Australia traditionally through public examinations and possibly will be accomplished in the future by means of a national curriculum. No counterparts, that match the range of policies mandated by educational authorities in the United States, have been enacted in Australia for selecting and adopting instructional materials. The informality of the policies and processes used to select instructional materials in Australian education is reflected in the paucity of research studies included in this section. Several writers, notably Jeffery (1976: item 050) and Piper (1976: item 068), have developed criteria for selecting instructional materials based upon variables

affecting teaching and learning in classrooms. Only Laslett et al. (1984: item 056) and the South Australia Department of Education (1987: item 078) have defined a process for decision-making in selecting instructional materials. Some authors have argued for various groups to be included in the decision-making process when instructional materials are selected, including several urging that students be included. Only a few research studies investigating the decision-making groups and processes involved in the selection of instructional materials are reported, notably those by Brimble (1981: item 032), Marsh (1983: item 059), and Giddings (1988: item 039). Several writers have discussed the implications of policies and practices affecting the decision-making process for selecting instructional materials in Australian settings, although only the systematic research study by Fincher (1982: item 037) substantiated these anecdotal accounts with evidence of the adherence to policies.

1.2 Production and Marketing of Instructional Materials

1.2.1 The Publishing Industry

In their survey of literature on the publishing industry, Woodward et al. (1988) reported that little has been written in professional journals and there are few research reports on this topic, but a number of newspaper articles reported accounts of publishers' interviews with reporters. Within this coverage, they found two types of research, one laudatory and the other factual and anecdotal. The former encompassed articles authored by publishing company executives praising the quality of their publications. The latter included reports on the process used by commercial publishers to develop textbooks, usually undertaken by development houses with the main function of authors and consultants being to provide a seal of respectability (Edgerton, 1969; and Marquand, 1985). Relatively few reports of this process have been documented, but Squire and Morgan (1990) have described the process used by large commercial publishing houses to develop textbook programs, and Young (1990) has described the process to revise textbook programs, as involving the steps of stating a rationale and detailed specifications for the program, surveying market needs and competitive products, reviewing recent research, developing the textbook by employing a production team of authors, subject specialists, consultants, content and copy editors, a photo researcher, an art director, a production manager and sales personnel overseen by a senior editor, trial-testing particular components, developing promotional materials, and using sales personnel to market the product.

Woodward et al. concluded that the publishing industry is by nature both cryptic and inaccessible. The same verdict can be passed upon the commercial publishing industry in Australia, judging from the few works published on its activities (Hudson, 1980: item 106; and McQueen, 1986: item 121). The research listed in this section, however, reflects the emphasis that projects and activities sponsored by state departments of education, institutions of higher education and other educational organisations have had upon the production and marketing of instructional materials in Australian education. Many Australian writers of research, relating to the development of specific instructional

materials, are concerned to identify and document its inherent process. Another group of researchers have reported on the functions of particular agencies, such as the Australian Academy of Science, Curriculum Development Centre, education centres and curriculum service centres, in producing and diffusing instructional materials to Australian schools (Howe, 1978: item 105; Birch, 1984: item 088; Treagust et al., 1985: item 135; Treece, 1986: item 136; Hughes and Kennedy, 1987: item 107; Lowe and Stephens, 1987: item 115; and Dircks, 1988: item 098). Several researchers described models that particular educational organisations could implement to develop instructional materials, or discussed the implications of such models (Morgan, 1978: item 123; Kenworthy and Schilling, 1984: item 112; and Barker and Taylor, 1989: item 085).

Woodward et al. also indicated that some research is reported on the physical attributes of textbooks, namely, on the increase in their length and on their design qualities (Nietz, 1952). Ostensibly, this research is intended as a function of the marketing of textbooks. They also included items on learner verification and revision, procedures encompassing gathering and analysing data obtained from field-testing textbooks with appropriate groups of learners and then revising them on the basis of the results, indicating that this research related to this interest in consumer influence upon the marketing of textbooks (Educational Products Information Exchange Institute, 1980; and Komoski and Woodward, 1985). These studies reported that application by publishers of learner verification and revision as a means of improving the effectiveness of instructional materials became a controversial issue in American education following congressional testimony by the Educational Products Information Exchange Institute in 1971, recommending that the National Institute of Education sponsor a National Learner Verification and Revision Task Force, which subsequently defined the Guidelines for Reporting and Assessing LVR Activities. Attempts to influence state legislatures and publishers to adopt these Guidelines failed in 1977, however, because the majority of commercial publishers failed to cooperate. Although responsible Australian developers of instructional materials apply the means to provide learner verification and revision, its use has never been made an issue. This section contains several items that report either studies of techniques for providing learner verification and revision (Chong, 1988: item 091), or studies of its use to improve the effectiveness of particular instructional materials (Beeson, 1979: item 087; Fraser, 1985: item 099; Fraser, 1985: item 100; and Mitchell and Traill, 1986: item 122).

1.2.2 Innovation and Reform

The curriculum reform movement in the United States, initiated by the Physical Science Study Committee in the late 1950s, redefined the content and teaching-learning methods used in the curriculum, as well as producing a vast quantity of instructional materials. Thirteen projects had been initiated by 1964, and this increased to twenty-six by 1966. Teams of scholars from universities and professional educators developed and trial-tested instructional materials that were designed to accomplish the desired goals of the projects in terms of the principles of curriculum reform. These materials had some common attributes; few included a basic textbook but instead used slides, filmstrips, records, cassettes,

films, games, simulations, copies of original documents and primary sources. Dissemination of the materials was usually accomplished through workshops providing inservice training for teachers.

Woodward et al. (1988) cited several research studies into the effects that such programs as the 'new social studies' had upon the characteristics of instructional materials produced during this period (Helgeson et al., 1977; Fetsko, 1979; Schneider and Van Sickle, 1979; Shaver et al., 1979; Welch, 1979; Downey, 1983; and Agostino and Barone, 1985). They also included a number of studies during the late 1970s identifying why instructional materials produced during the curriculum reform movement were no longer being used (Hahn et al., 1977; Weiss, 1978; Shaver et al., 1979; and Marker, 1980). These researchers offered a variety of explanations for this failure, including teachers adopting the materials without altering their teaching styles to suit the inherent process emphases in the materials, or the programs having unrealistic expectations that led to misapplications. Elliott (1990) argued that the challenge posed by the multimedia materials packages produced by these projects failed to replace conventional textbooks, although publishers of textbooks did adopt some of the features of these competitors, such as an expansion in subject-matter content and adding a variety of supplementary materials.

The curriculum reform movement in the United States stimulated initiatives for curriculum reform in the Australian states when state education departments, professional associations and other educational organisations established projects for curriculum reform during the mid-1960s. The need felt by participants to extend these reforms nationally led to the Australian Commonwealth funding the Australian Science Education Project (ASEP) in 1968, in which various educational authorities participated. For the first time, ASEP initiated national cooperation between various educational authorities in Australia for the purpose of curriculum development. Such cooperation laid the foundations for the functions of the Curriculum Development Centre, which was established by the Australian Commonwealth in 1973. Thereafter, the Curriculum Development Centre assumed the coordinating role for ASEP, and later coordinated the research, development and diffusion of other large-scale projects, such as the Social Education Materials Project (SEMP) and the Language Development Project (LDP), by employing processes characteristic of the curriculum reform projects in the United States. Teams from each state and territory were used for curriculum development, a commitment was made to develop 'hands-on' activities as well as including process skills, and the sets of curriculum materials were made sufficiently flexible to be adapted through a professional development function so as to meet the needs or abilities of all Australian students. Spring (1978: item 165) described how aspects of the research, development and diffusion model employed in these projects were gradually modified to accommodate the growing commitment of Australian educational authorities during the 1970s to foster school-based curriculum development. Most of the items in this section refer to three aspects of ASEP, SEMP and LDP; to the processes used to develop, disseminate and diffuse instructional materials, to providing content analyses of curriculum materials, or to surveying the subsequent use of these products in Australian schools.

Several items examined the implications of such projects for professional development and in-service training, including two documenting the Science Teaching Project (Flynn, 1978: item 148; and Flynn, 1980: item 149), which supplemented ASEP by providing a teacher development function. Other research studies examined the development, dissemination and use of curriculum materials in small-scale projects, such as the Environmental Education Project (Robottom, 1983: item 164).

Hughes and Kennedy (1987: item 107) reported upon subsequent projects initiated by the Curriculum Development Centre. Although similar processes were employed in these projects, including those currently being coordinated by the Curriculum Corporation with the intent of fulfilling a common curriculum framework, a shift in policy within the Curriculum Development Centre away from the production of curriculum materials to curriculum development in collaborations with state and territorial education departments became apparent after the advent of the Core Curriculum Program in 1980. Although the search for titles extended to this later period, there is little evidence of a continuing interest in conducting research into the dissemination and adoption of instructional materials produced by subsequent projects initiated by the Curriculum Development Centre, or its successor the Curriculum Corporation.

2 Evaluation and Criticism of Instructional Materials

2.1 General Discussion and Special Topics

2.1.1 General References

Within their commentary upon general references to research on the evaluation and criticism of textbooks, Woodward et al. (1988) drew attention to the influence that two authors, Fitzgerald (1979) and Vitz (1985), have had upon stimulating public interest in the quality of textbooks. They also included within this section citations to historical and recent books and articles on research about textbooks, as well as reviews of research. Within the former category, mention should be made of five significant research studies: the collected work edited by Whipple (1931), which reported studies on various issues relating to textbooks at that time; a special issue of *Phi Delta Kappan* (1952), containing a collection of articles on various aspects relating to textbooks; a collected work edited by Cronbach (1955), which discussed issues about the role of textbooks in education at that time; a study by Elson (1964) of widely used textbooks in the United States during the nineteenth century; and the correlational study by Chall et al. (1977) of textbook quality and SAT scores. Within the latter category, *Review of Educational Research* contained three important reviews of research on textbooks: Otto and Flournoy (1956) reviewed studies on textbooks since the beginnings of such research in the 1920s; Hockett (1959) reviewed research reported between 1956 and 1958; and Davis (1962) reviewed research reported between 1957 and 1961.

Although they used this section to refer to significant historical documents, Woodward et al. stated that it contains a potpourri of references that do not fit in any other section of their bibliography. Broadly speaking, this is an apt

description for the same section in this bibliography. Upon closer inspection, however, one is able to discern three main themes among these references: items that relate to the analysis of instructional materials (Jeffery, 1976: item 170; Davis, 1980: item 168; Marsh and Stafford, 1984: item 173; and Strube, 1986: item 178); items investigating issues relating to the collection, synthesis and dissemination of information on instructional materials (Williams and Lowther, 1976: item 182; Broadbent, 1983: item 166; Broadbent and Kemp, 1983: item 167; Jeffery, 1984: item 171; South Australia, Department of Technical and Further Education, 1986: item 176; Stannus, 1986: item 177; Western Australian Educational Computing Consortium, 1986: item 181; and Watt, 1989: item 180); and items examining the application of evaluative procedures to instructional materials within teacher education (Marsh, 1983: item 172; and Reynolds et al., 1988: item 174), or multicultural education and programs for English as a second language (Taylor, 1979: item 179; Garner and Biewer, 1983: item 169; and Singh, 1987: item 175).

2.1.2 Readability

Four issues were identified by Woodward et al. (1988) as being prominent concerns of researchers investigating text readability. The first issue involved describing the development of readability formulas or comparing the respective merits of the various formulas (Dale and Chall, 1948; Lorge, 1951; Spache, 1964; Klare, 1974-1975; and Fry, 1977). A second type of research involved the application of formulas to estimate the readability of commercially published textbooks (Bradley et al., 1980; and Rowls and Hess, 1984). A related consideration reported in research is the implication that such studies have for the widespread use of readability formulas by selection committees and publishers, and the consequent reduction or increase in vocabulary loads of textbooks (Elliott and Wiles, 1980; McKinney, 1983; Wheeler and Sherman, 1984; and Fry, 1987). Chall and Conard (1990) presented an historical study of this relationship in which they identified that publishers began reducing the vocabulary load of instructional materials during the late 1920s in response to early readability studies. They offered several explanations for the immediate reaction of publishers to these research findings: the cumulative effect of numerous studies; the applied nature of the research; and the democratisation of the student population. This trend prevailed until the early 1960s, when publishers began increasing the vocabulary load of their publications in response to curriculum reforms. The most significant issue identified by researchers concerned the validity of readability formulas as indices of text difficulty (Davison and Kantor, 1982; and Armbruster et al., 1985). These researchers have reported two major problems with readability formulas: first, they only take into account a few variables affecting comprehension, usually only word difficulty and sentence length, whilst ignoring less quantifiable variables such as content difficulty, organisation of ideas and authors' styles; and second, they neglect external effects upon readers such as motivation, interest, purpose and perseverance.

This evidence has stimulated investigation into either incorporating more factors into readability formulas, or finding more valid means of measuring text difficulty (Irwin and Davis, 1980; Ring, 1983; and Feldman 1985). Recent research, however, has concentrated upon determining a judgmental means of matching

the difficulty level of prose text to the abilities of students, termed 'considerateness'. Kantor et al. (1983) have proposed that authors may write considerate text by complying to four criteria: choosing a discourse structure; establishing a coherent relationship between ideas; maintaining unity of purpose; and ensuring audience appropriateness. Baumann (1986) has provided empirical evidence substantiating that considerate text enhanced student ability to reconstruct or generate main ideas in composition, although there was no effect upon a main idea recognition task.

Three of these issues are represented in the items cited in this bibliography. Several items described readability formulas or compared the respective merits of various formulas. A difference between the Australian and the American research appears to be the greater attention given by Australian researchers to the treatment of cloze procedure (Green and Morris, 1977: item 189; Elkins and Davies, 1978: item 188; and Anderson and Coates, 1979: item 184). Five research studies are cited reporting the application of readability formulas to estimate the readability of commercially published materials (Beiers and Anderson, 1978: item 185; Henderson, 1979: item 190; MacDonald, 1980: item 191; MacPherson and Kammann, 1980: item 192; and Pirozzo, 1982: item 194). The discussion by Bouffler (1984: item 186) about the validity of readability formulas as indices of text difficulty represented the only study of this type reported. No research on the topic of considerateness was identified during the search.

2.1.3 Treatment of Minorities and Women

Concern over the treatment of minority groups in textbooks used in American schools arose as part of the drive for civil rights by minorities during the 1960s. Attention focused initially upon American Negroes, the most frequently studied of these groups, in a spate of reports by such organisations as the Anti-Defamation League of B'nai B'rith (Marcus, 1961) and the American Federation of Teachers (Sloan, 1966). Popular magazines, such as *Saturday Review, Atlantic* and *Newsweek* drew the subject to public attention during the mid-1960s. The California State Department of Education (Stampp, 1964) commissioned its own study, and the Committee on Education and Labor of the United States Congress (1966) held hearings on textbooks for schools and the treatment of minorities. Invariably, these studies reported inaccuracies, omissions and distortions in the representation of minorities in textbooks.

It was not until the decision of the United States Supreme Court on the *Lau v. Nichols* case in 1974 that the force of the civil rights movement was sufficient to affect the curriculum in American schools through the Lau Remedies, which gave support to the Bilingual Education Programs (Title VII of the Elementary and Secondary Education Act) enacted in 1968. At the same time, the Ethnic Heritage Studies Programs (Title XI of the Elementary and Secondary Education Act) introduced into American schools three distinct forms of cross-cultural education: multicultural education which aimed at imparting understanding of concepts such as prejudice and discrimination in common terms for different cultural groups; multiethnic education which involved modifying school environments to provide equal educational opportunities for different ethnic

groups; and ethnic studies aimed at transmitting knowledge about the variety of ethnic groups.

These developments led to pressures to exclude biases and stereotyping from textbooks, as well as rectifying omissions and inaccuracies concerning minority groups. Woodward et al. (1988) believed that such revisions probably had more influence upon the content of American textbooks than any other force in recent times. They annotated a number of systematic research studies, commencing at this time, on the treatment of ethnic minorities in textbooks (Kane, 1970; Butterfield et al., 1979; Grant and Grant, 1981; and Garcia, 1980), of women and sex roles in textbooks (Trecker, 1971; Shirreffs, 1975; Hahn and Blankenship, 1981; and Bordelon, 1985), as well as the disabled (Baskin, 1981; and Hopkins, 1982) and the aged (Fillmer and Meadows, 1986).

The influence of the American civil rights movement, together with forces operating within Australian society during the post-war period, were responsible for raising concerns over the treatment of minority groups in instructional materials used in Australian schools during the early 1970s. The latter were outcomes of responses within Australian society towards the influx of large numbers of immigrants between the late 1940s and early 1960s, to Australian Aboriginal communities, and to women. The initial attempt to assimilate the immigrants had failed by the early 1960s, leading them to assert their role as a minority pressure group during the late 1960s and early 1970s, which won acceptance in Australian society during the mid-1970s. Australian Aborigines became a forceful pressure group, especially in relation to claims for land rights, following their guarantee of full civil rights and the transfer of Aboriginal affairs from the states to the Australian Commonwealth as a consequence of a constitutional referendum in 1967. These social developments led initially to the implementation of a five-year Child Migrant Education Program in 1970 providing instruction in English as a second language to children of non-English speaking backgrounds, which extended during the mid-1970s to the provision of locally based programs for multicultural education, instruction in community languages, and bilingual education. The women's liberation movement inspired considerable research in Australia into the education of girls during the late 1960s and 1970s, leading to a comprehensive National Policy for the Education of Girls in Australian Schools in 1987.

The Office of the Commissioner for Community Relations (1979: item 218) presented a significant historical study of the treatment of Australian Aborigines and immigrants in textbooks used in Australian schools, and documented the early research studies of racist bias in textbooks reported by Ian Spalding, Alan Doobov and Lorna Lippmann during the early 1970s. Cope (1987: item 201; 1988: item 202; and 1988: item 203) provided a substantial, retrospective study of racist bias in Australian textbooks, from which he interpreted the treatment of minority groups to reflect important changes occurring within Australian society. Gilbert and Rowe (1989: item 206) presented an important review of research studies into gender bias in instructional materials used in Australian schools. References included several studies reported in this bibliography, such as significant studies of sex bias in basal reading materials (Healy and Ryan, 1975:

item 208; James, 1975: item 211; Bradley and Mortimer, 1978: item 198; Anderson and Yip, 1987: item 197; and Freebody and Baker, 1987: item 205), and in mathematics, science and physical education materials (Ives, 1984: item 210; Gizycki, 1976: item 207; and Rennie and Mottier, 1989: item 220; and Browne, 1990: item 199).

2.2 Subject Matter Content Coverage

Woodward et al. restricted their search for titles dealing with subject matter coverage to five core subjects: language arts; mathematics; reading; science; and social studies. This restriction has been maintained in the compilation of articles included in the same section of this bibliography. The articles annotated in this section examine content coverage in the main; only a few deal with other aspects of instructional design such as philosophy and purpose, teaching and learning methods, and the means used for student assessments.

The major theme in the research on content coverage found by Woodward et al. in each of the five subject areas involved the identification of a dichotomy between the 'real' world that students experience and the world portrayed in textbooks. Such analyses indicated that science and social studies textbooks offered selective and, sometimes distorted, content whilst language arts, reading and mathematics materials offered students repetitive sequences of isolated skills. Unfortunately, such a conclusion cannot be inferred from the reported research by Australian authors. This judgment is made on the basis of the quantity of the research; with the exception of research reported in the section on science, few studies have reported the time-series data necessary to form a conclusion.

2.2.1 Language Arts

Since the early 1960s, there has been a number of initiatives to improve the quality of teaching and learning in language arts programs. The works of David Holbrook published at this time aroused interest among educators in substituting composition with creative writing. The outcome of the Anglo-American Conference on the Teaching of English held at Dartmouth, New Hampshire in 1966 was more significant by promoting John Dixon's view of a personal growth model for language education. This model was elaborated during the late 1960s in a series of publications by Moffatt, Barnes and Britton. Australian educators formed the National Committee on English Teaching in 1972 to promote these views. Following a submission by the National Committee on English Teaching in 1976, the Curriculum Development Centre sponsored the Language Development Project (LDP), which ran from 1977 until it was suspended in an unfinished state by the closure of the Curriculum Development Centre in 1981. The promotion of the 'process writing' approach, based upon the writings of Donald Graves, formed a major influence upon language arts programs in Australian schools during the 1980s by placing importance upon children's writings as forming the 'literature of the classroom'. The Early Literacy Inservice Course (ELIC) represents the most important program implemented during the 1980s. ELIC was adapted by the South

Australian Department of Education from an inservice training program developed in New Zealand as a means of implementing in schools Marie Clay's work on reading recovery. Following its trial in South Australia during 1983 and 1984, ELIC was disseminated throughout Australia by means of a national coordination effort supported by the Commonwealth Schools Commission, the Curriculum Development Centre and participating state departments and independent school systems. Thus ELIC became an important means during the late 1980s for assisting teachers to provide for the literacy needs of pupils in Australian primary schools through an inservice training program comprising ten components: young children learning language; observing children reading; interpreting running records; matching children with books; encouraging reading development; the writing process; children's writing development; encouraging writing development; teaching writing; and making programming decisions.

Commentators on these recent developments in language education often state that those responsible for these initiatives have paid more attention to 'process' than 'product'. The lack of attention given to products, or the genres of textual materials, probably accounts for the lack of research in this subject area in both the United States and Australia. Only a small number of articles on American research about language arts textbooks is identified by Woodward et al. (1988), but includes a content analysis of language arts textbooks by Graves (1977) indicating a lack of attention to writing process. The Australian research included an analysis by Derewianka (1989: item 223) of teaching and learning activities involving various genres of textual materials, an analysis by Hammond (1990: item 225) of textual materials to support the contention that learning to write is a complex task continuing into adulthood, and an analysis by Carr and Huddleston (1990: item 222) of the treatment of grammar in language arts textbooks.

2.2.2 Mathematics

During the first part of the twentieth century, mathematics education in Australian schools was characterised by its inertia. The first notable changes occurred during the late 1950s through the influence of notions about concrete thinking which led to the introduction and widespread use in Australian primary schools of concrete aids such as Cuisenaire rods and Dienes blocks. The 'new mathematics' promoted by the curriculum reform movement in the United States was introduced to Australia through a seminar sponsored by the Australian Mathematical Society in 1962. Its outcome led to the development of 'new mathematics' programs and the publication of new textbooks which stressed inquiry approaches. The 'new mathematics' programs were abandoned during the 1970s, however, as a result of mounting criticisms claiming students were no longer learning 'basic skills'.

Educational reform in the 1980s was reflected in mathematics education as the 'mathematics as problem solving' movement. Adoption of its tenets in practical terms required extensive professional development of teachers to provide them with the basis to move away from the notion of viewing mathematics as a body of content to one in which the problem-solving process is regarded as more

important. Two important projects were initiated by Australian educational authorities to accomplish this purpose. The first, the Reality in Mathematics Education (RIME) project was implemented in the late 1970s by the Victorian Ministry of Education, in which publications documenting exemplary activity-based lessons were made available to teachers with the intention that they would apply these approaches in their classrooms. The character of the RIME project influenced the Mathematics Curriculum and Teaching Project (MCTP), sponsored by the Curriculum Development Centre between 1985 and 1988. This program focused upon recognising and documenting examples of exemplary practices mathematics teachers use, and disseminating this information as a means of facilitating professional development (Baxter, 1988: item 226).

The failure of authors and publishers to produce textbooks that give attention to problem-solving processes has been recognised as one of the important factors constraining the practical success of 'mathematics as problem solving' reforms in classrooms. Woodward et al. (1988) cited several reports on research indicating that mathematics textbooks are inadequate as a resource for students to acquire problem solving and other higher order cognitive processes (Suydam and Osborne, 1977; Callahan and Passi, 1985; and Nicely, 1985). In addition, other research focused upon correlational studies, one to establish the relationship between research and the content of arithmetic textbooks (Dooley, 1960) and another to establish the relationship between mathematics textbooks and tests (Freeman et al., 1983). This evidence of the function of mathematics textbooks in American research contrasted markedly with the lack of research annotated in the same section of this bibliography. Only Fletcher (1988: item 227) provided evidence of the quality of a set of curriculum materials designed for a particular mathematics program.

2.2.3 Reading

The emphasis in this section is placed upon reading comprehension, an area in which considerable research has been generated since the 1960s. Attempts to describe the process resulted in several conflicting theories, which have influenced both classroom practice and the content of commercial reading materials. Influenced by behaviourist psychology, information transfer theorists presupposed that reading is a letter-by-letter and word-by-word process in which readers use textual materials in a 'bottom-up' manner, beginning with sound-symbol relationships, moving to vocabulary, then to syntactic rules, and so on. These theories gave rise to the approaches of 'look-say' and 'phonics analysis' used in basal readers (or reading schemes). Information transfer theories were challenged during the late 1960s and 1970s by a number of researchers: Frank Smith argued that the knowledge the reader possesses is critical in predicting the meaning of textual materials; Carolyn Burke and Kenneth Goodman established a relationship between patterns of miscues and reading comprehension; and Marie Clay developed instructional programs based upon these interactive theories which she verified through research data. These researchers believed that reading of textual materials occurs in a 'top-down' manner, implying that meaning is paramount and other sources of information are accessed according to need. The more recent transactive theory of Louise Rosenblatt, which holds

that meaning encompasses more than the written text and reader's knowledge, is an extension of these interactive theories.

In this section, Woodward et al. (1988) included a number of reports which reflected these changes in reading instruction. Their survey opened with a landmark publication, a work in which Flesch (1955) argued that the 'look-say' approach should be replaced by the 'phonics analysis' approach. By capturing public attention at the time, this book stimulated considerable interest in the quality of basal readers. They also included three other studies of historical interest: the descriptive analysis by Chall (1967) of basal reading series; the analysis by Bond and Dykstra (1967) of some 27 studies of the relationships between various approaches to beginning reading instruction and student achievement; and the survey by Aukerman (1971) of methods and materials used in 101 approaches to beginning reading instruction.

The emphasis of current research upon the teaching of reading comprehension is examined in two series of collected works: Anderson et al. (1984) reported a series of studies on variables affecting the quality of comprehension instruction offered in basal reading materials; and Duffy et al. (1984) reported a series of studies on variables affecting the quality of comprehension in textbooks used in various subject areas. Another current issue, the presentation of sequences of skills in many reading materials at the expense of attention to the process of reading, is considered by another group of researchers (Durkin, 1981; Armbruster and Gudbrandsen, 1986; Green-Wilder and Kingston, 1986; Winograd and Greenlee, 1986; and Hoffman, 1987).

There are comparatively few reported studies by Australian researchers of the effects of reading materials upon reading comprehension; Pirozzo (1982: item 242) examined the relationship between reading comprehension and the readability of textbooks, Baker and Freebody (1986: item 231) investigated the attributes of dialogue used in basal reading materials, and Cairney (1988: item 233) investigated the effects of reading materials upon students' attitudes. Three authors examined the changes in the practice of reading instruction occurring as a consequence of the shift of influence from information transfer theories to interactive theories (Wilson, 1982: item 245; Bradley, 1984: item 232; and Patullo, 1987: item 241). Other authors examined a variety of issues pertaining to the relationship between the interactive theory of the reading process and reading materials; Unsworth (1981: item 243) discussed the mismatch between readers' skills and textual demands of reading materials, Cambourne (1985: item 234) discussed the quantification of student assessments of reading comprehension, and Furniss (1985: item 236) discussed how early literacy development is enhanced through an integrative process of experiences and reading. One noteworthy observation can be drawn from the Australian research annotated in this section. It contains a relatively high proportion of articles, notably those by Unsworth, Bradley and Murphy (1988, item 239), which deal with the application of materials in teaching and learning activities.

2.2.4 Science

Science education in Australia was first influenced by the curriculum reform movement when the Science Standing Committee of the Victorian Universities and Schools Examinations Board conducted a conference in 1963 to discuss reforming the science curriculum in Victoria. This led to the Australian Council for Educational Research (ACER) sponsoring the Junior Secondary Science Project (JSSP) in 1966. Following a conference attended by representatives from ACER and the Departments of Education from Victoria, South Australia, New South Wales and Tasmania, a submission was presented early in 1968 to the Australian Commonwealth to fund a national project. This led to a conference being held in January 1969 to design guidelines for expanding the JSSP to form the basis for the national project, which was later titled the Australian Science Education Project (ASEP). ASEP produced forty-four components of a multimedia curriculum material for use at the junior secondary level through the use of teams between October 1969 and March 1974. Then, between 1977 and 1979, ASEP was supplemented by the Science Teaching Project in which twenty-three modules for inservice education of science teachers were developed. The curriculum reform initiated through ASEP was matched by improvements in the provision of science equipment to Australian schools through the Australian Science Facilities Program, which ran concurrently with ASEP between 1964 and 1975.

Reform of the Australian educational system during the late 1980s included a focus upon raising student participation, particularly of girls, in science and mathematics programs in schools. In response to this need, the Girls and Mathematics and Science Teaching Project was sponsored by the Curriculum Development Centre between 1987 and 1989. This project focused upon analysing information relating to the participation of girls in mathematics, science and related fields, producing professional materials to assist teachers implement strategies to improve the participation of girls, and to provide curriculum materials that reflect the perspective of the project.

Woodward et al. (1988) identified that most researchers agreed that contemporary science textbooks did not reflect the true nature of science. Woodward and Elliott (1990b) also reviewed research indicating that market pressures have resulted in science textbooks becoming encyclopedic in an attempt to encompass every content coverage requirement of the curriculum. Such studies have shown that science textbooks require students to comprehend an extensive vocabulary of specialised and technical terms, and topics are treated in theoretical rather than descriptive terms (Carrick, 1977; Lowery and Leonard, 1978; Lehrman, 1982; Stuart, 1982; Newton, 1983; Yager, 1983; and Curtis and Reigeluth, 1984). Another group of researchers have expressed concerns about the superficiality of science textbooks with their emphases upon memorisation and lack of attention to higher order processes (Babikian, 1975; Barrass, 1984; Denny, 1983; Elliott and Nagel, 1987; Hurd et al., 1980; Gabel, 1983; Pauling, 1983; and Pratt, 1985). Other researchers have discussed the cursory treatment given to controversial issues in science textbooks (Krupka and Vener, 1982; and Rosenthal, 1984).

The content of science textbooks used in Australian schools has been the subject of a greater number of research studies than the content of other subject matter

coverage included in this bibliography. The majority of these research studies have applied developmental methods to investigate patterns and sequences of change in science textbooks over extended time durations. They have concentrated upon investigating the philosophy and purpose of science education (Lynch and Strube, 1985: item 249; Lynch and Strube, 1985: item 250; and Polya, 1986: item 252), the treatment of particular topics in science textbooks (Strube, 1984: item 255; and Strube, 1988: item 256), or the language and stylistic characteristics of science textbooks (Lynch and Strube, 1983: item 248; Strube and Lynch, 1984: item 258; Strube, 1989: item 257; and Martin, 1990: item 251). There has been little attention given by researchers, however, to applying correlational designs to investigate the demands that vocabulary or topic abstraction place upon students, to the use of higher order processes, or to the treatment of controversial issues in science textbooks.

2.2.5 Social Studies

Social studies education has been fraught since its advent by the need to reconcile two objectives: that of 'citizenship' and that of 'scholarship'. Although social studies education evolved from citizenship education in the United States during the nineteenth century, its curriculum was first shaped as an outcome of the Commission on the Reorganisation of Secondary Education in 1916. Arising during the curriculum reform movement of the 1960s, the 'new social studies' reinforced the move towards scholarship by including additional social science disciplines within the content of social studies. This development was challenged, however, by a shift to citizenship education during the late 1960s and 1970s through the inclusion of content that centred upon societal problems.

This shift from scholarship to citizenship education influenced the content of curriculum reform in social studies education in Australia that commenced during the late 1960s. Following a conference on social studies education held in Victoria during 1967, a National Committee on Social Science Teaching (NCSST) was formed in 1970 with the task of identifying goals for a new social studies curriculum. Following a survey conducted during 1973 to identify common areas for curriculum development, the NCSST submitted a proposal to the newly established Curriculum Development Centre to sponsor a national project. Funding for the project, titled the Social Education Materials Project (SEMP), was obtained during 1974. Eight teams of teachers produced the component materials during 1975 and 1976, which were then trial-tested in schools and published during 1977. The treatment of unconventional family life within the component, the Family, became sufficiently contentious in Queensland during 1978 for the state government to censor the use of SEMP materials in Queensland schools.

Some evidence is now available, however, supporting a view that an earnest attempt is being made to reconcile the principles of scholarship and citizenship education within social studies education in Australia. The intention of the Social Literacy Project, which commenced in 1979 at the Centre for Multicultural Studies at the University of Wollongong in New South Wales, has been to develop social studies materials that address the social issues of

multiculturalism, sexism and Aboriginal studies through inquiry learning, without losing the rigour of academic scholarship. This has been achieved by developing cheap, accessible, and easy-to-use curriculum materials through an extended process of consultation with professionals and learner verification and revision. The materials embody a curriculum framework that focuses upon social concepts instead of content. The curriculum framework contains two levels: a microlevel comprising lesson organisation; and a macrolevel extending over a year or longer. The microlevel consists of an instructional sequence of six steps: focus question; consider input, such as a moral dilemma, factual information or a particular type of textual material; analysis, or critical activities relating to input; main ideas, which specifies the concept being developed; investigation, or social inquiry applying concepts to broader social contexts; and reflection, which provides various means for student assessment. The macrolevel involves developing a framework of concepts ordered around principles of moving from the concrete to the abstract, from simple to complex, and from analogies to social reality (Cope and Kalantzis, 1990: item 263).

Woodward et al. (1988) identified that most of the extensive American research on social studies textbooks is concerned with the adequacy of content coverage. These included comparative studies of changes in the content coverage of social studies textbooks: Jackson (1976) examined geography textbooks published between 1900 and 1970 to identify the persistence of disproven concepts, finding that the theory of environmental determinism was used twenty years after it had been abandoned; Fitzgerald (1979) studied history textbooks published since 1900 finding that the content had been influenced by various biases leading to interpretative revisions of American history to reflect current values; Patrick and Hawke (1982) identified similarities within the content of textbooks published between 1960 and 1980; Agostino and Barone (1985) identified that textbooks published in the late 1970s and early 1980s contained fewer 'new social studies' innovations than textbooks published a decade earlier; and Ravitch (1987) studied subject matter about United States history presented in early childhood materials by comparing current materials with those of the 1930s and suggested a return to the earlier content to promote cultural literacy.

Another group of researchers traced how changes in subject matter on various topics presented in social studies, history or geography textbooks reflected shifts in public values: the treatment of immigrants (Reynolds, 1952); the treatment of slavery and the Reconstruction Era (Janis, 1972); the treatment of the presidency (Barger, 1976); the treatment of African cultures (Zeikiros and Wiley, 1977; Wilson, 1980; and Wiley, 1982); the depiction of Southeast Asian countries (McAulay, 1978); the treatment of the Vietnam War (Griffen and Marciano, 1980; Fleming and Nurse, 1982; and Logan and Needham, 1985); the treatment of Soviet history (Danilov and Sharifzhanov, 1981); the coverage of Arab culture (Jacobs, 1981); the treatment of Japanese culture (Wojtan, 1981); the depiction of Central American countries (Anderson and Beck, 1983); the treatment of issues about world development (Newitt, 1984); the portrayal of Afro-Americans (Garcia and Tanner, 1985; and Ellington, 1986); and the portrayal of Irish, Italian, Jewish and Polish Americans (Garcia, 1986).

Relatively few research studies have been reported on the content coverage of social studies materials used in Australian schools. There have been no comparative studies tracing changes in the content coverage of social studies materials over successive periods, whilst only two studies have traced how changes in the subject matter about various topics reflect public values: the treatment of India (Noronha, 1978: item 265); and the treatment of Arab culture (Ata, 1984: item 259).

2.3 Ideology and Controversy

2.3.1 Ideology and Instructional Materials

Woodward et al. (1988) noted the importance of philosophical and ideological emphases that authors give to the subject matter of textbooks because of the evident dependence of teachers and students upon textbooks. In this section, they included articles on reported research investigating how subject matter is selected and presented in order to transmit national, regional and group values. Most of the articles were concerned with two issues: how authors have influenced political socialisation (Belok, 1981; Fratczak, 1981; and Haavelsrud, 1980); how various ideologies are reflected in textbooks used in the social sciences (Anyon, 1979; Hodenfield, 1979; Fleming, 1981; and Reynolds, 1981); and how the content of basal reading materials transmit cultural values (DeCharms and Moeller, 1962; Zimet, 1969; Hurst, 1979; and Freebody and Baker, 1985).

Australian authors have contributed more substantially to research on the effects of ideological issues upon the content of instructional materials than other areas. Each of the three issues, identified by Woodward et al., are represented in the Australian research. Three items refer to the controversy surrounding the politicisation of Japanese textbooks in 1982 (Seddon, 1983: item 277; Williamson-Fien, 1985: item 279; and Seddon, 1987, item 278). Olson (1988: item 276) examined how the values of corporatism are embedded in instructional materials used in Australian schools. The various ways in which the content of basal reading materials transmit cultural values have been investigated and reported extensively by a pair of joint authors (Freebody and Baker, 1985: item 271; Baker and Freebody, 1988: item 267; Baker and Freebody, 1989: item 268; and Baker and Freebody, 1989: item 269). Australian authors have also investigated another topic, the way in which textual materials form an ideological influence upon the curriculum, that does not appear to be represented in the American research. Kress (1985: item 274) argued that the forms and meanings of textual materials affect the curriculum in terms of language, ideology and change. Several authors examined the issues of how technology, textual analysis and communication impinge upon the nature of textual materials and thereby affect the curriculum (De Castell and Luke, 1989: item 270; Gilbert, 1989: item 272; and Luke, De Castell and Luke, 1989: item 275). Kirk (1990: item 273) investigated how multimedia curriculum packages, of the type first marketed during the curriculum reform movement, have shaped the perceptions of participants in the educational process.

2.3.2 Controversy and Censorship

Censorship of instructional materials used in American schools arose during the aftermath of the American Civil War. Various regional interest groups were successful in influencing publishers to review accounts of that conflict in textbooks. Thereafter, the Daughters of the American Revolution, the Ku Klux Klan and the Knights of Columbus objected to various references in textbooks. In 1928, the Federal Trade Commission identified that several large corporations had attempted to alter the depiction of their organisations in textbooks. In 1939, a coalition of conservative interest groups attacked Harold Rugg's series of history textbooks as Communist propaganda, and similar protests increased in frequency during the McCarthy Era.

As a reaction to the influence that the civil rights movement had upon the presentation of controversial issues in textbooks during the 1960s, various groups of the 'New Right' became more active during the 1970s, leading to an increase in attempts at censorship, legal cases and to their organised activities. The most notable case of censorship involved the controversy surrounding the attempt by various groups to remove textbooks from the Kanawha County school district in West Virginia in 1974. The controversy arose in April 1974, when a newly-elected member of the Kanawha County Board of Education objected to the board's selection of certain texts for English programs. Following the board's adoption of the texts at its meeting in June, protesters mounted a campaign leading to the removal of the texts in September pending review by a citizens' committee. During its hearings, the citizens' committee divided into two factions with the moderate majority recommending that only 35 of 325 books be removed. This outcome was supported by the board in November, and the bulk of the books were reintroduced into the schools. This outcome caused the protesters' campaign to become more vociferous, leading to the arrest of the district superintendent and board members, withholding children from attendance at school, and a proposal by protest groups centred in the Upper Kanawha Valley to secede and form a more responsive school system. The board acceded to some of the protesters' demands during 1975 by issuing new guidelines for selecting textbooks and planning to establish a number of 'alternative' elementary schools. Although the protest subsided during 1975, resentment lingered for some time between the contesting groups.

Beginning in 1972, a series of legal cases focused upon the issue of whether a school board could constitutionally remove books previously acquired and used by students from school libraries. These actions culminated with the case of *Pico v. Board of Education, Island Trees Union Free School District 16* being decided in the U.S. Supreme Court in 1982. The case arose in 1975 when three school board members sought to remove nine books from school libraries in the district. Four students challenged this action, which was upheld in a 5-4 decision by the Supreme Court. Subsequent legal cases involved actions by parents wishing to remove controversial materials from classrooms or to exempt their children from attendance in classes when such materials were being used. In 1987, such actions led to two important cases: in the case of *Mozert v. Hawkins County Board of Education*, the parents of seven families living in Church Hill, Tennessee sought to exempt their children from using a series of reading

materials on the grounds that the texts promoted secular humanist values contrary to their fundamentalist religious beliefs; and in the case of *Smith v. Board of School Commissioners of Mobile County*, parents and members of the fundamentalist Christian Evangelical denomination in Mobile, Alabama sought to remove from the school district 44 textbooks they claimed promoted secular humanism. In both cases, the plaintiffs were successful in lower courts but the decisions were reversed following appeals.

The organised activities of textbook censorship groups active in the United States are best exemplified by the Educational Research Analysts, an agency founded in 1973 by Mel and Norma Gabler in Longview, Texas. The main activity of Educational Research Analysts has been to review for improprieties those textbooks recommended for selection in Texas, and to circulate the findings of these reviews by newsletters to subscribers. In 1974, this group succeeded in lobbying the Texas State Textbook Committee to adopt a set of guidelines for selecting textbooks that reflected their criticisms of secular humanism and evolutionary theory. The guidelines were repealed in April 1984, when challenged with legislative action by an anti-censorship group, the People for the American Way.

The reported research on controversy and censorship is extensive. Woodward et al. (1988) identified three main categories among this research. The first group described attempts at censorship and surveys into the extent of censorship. Jenkinson (1983a) described a case study of an attempt to censor John Steinbeck's *Of Mice and Men* in Tell City, Indiana. Schipper (1983) described the attempts to censor Harold Rugg's textbook series, titled *Man and his Changing Society*, between 1939 and 1942. Watras (1983) analysed the Kanawha County textbook controversy. Fitzgerald (1984) analysed the values and motives of protagonists involved in a censorship attempt at Baileyville, Maine during 1981 and 1982 in which a court ordered a controversial book to be returned to a school library. Bogert (1985) discussed attempts to ban a particular book, *The Lottery*. Surveys undertaken to identify the extent of censorship attempts have been reported by several researchers: Cawelti and Olson (1982), and Kamhi (1982) reported an extensive survey of 1,891 elementary and secondary principals and librarians conducted by the American Library Association, the Association for Supervision and Curriculum Development, and the Association of American Publishers; and Seiferth (1982) reported a survey of 200 secondary principals in Illinois. Several researchers have used historical method to report the incidence of censorship attempts (Doyle, 1982; Jenkinson, 1983b; Kline, 1984; and Donelson, 1985). The second group described court cases, explained legal implications, and presented procedures for dealing with complaints about materials. Arons (1981) and Ryan et al. (1983) analysed the case of *Pico v. Board of Education, Island Trees Union Free School District 16*. Glenn (1987) and Rowell (1987) examined the implications of the case of *Mozert v. Hawkins County Board of Education*,. Several researchers have described the implications of recent legal cases (Stern, 1979; Lehr, 1985; Holden, 1987; and Hulsizer, 1987). The third group discussed issues arising from judgments on what is appropriate knowledge for children of different ages, the responsibilities of parents in determining what sorts of knowledge their children should be exposed to, and the role of teachers and

educational policy-makers in intervening in demands from various groups (Blume, 1982; Burress and Jenkins, 1982; McGraw, 1982; Nocera, 1982; Donelson, 1983; Considine, 1985; and Wynne, 1985).

The reported research suggests that protests over controversial issues in instructional materials used in Australian schools are a rare phenomenon. The single, notable case reported in research related to the censoring of instructional materials from the social studies programs, Man: A Course of Study (MACOS) and Social Education Materials Project (SEMP), in Queensland in 1978. The events leading to this controversy were set in motion as early as 1973, when the Queensland Department of Education pilot-tested the MACOS materials in fifteen primary schools. Of several censorship groups active in Queensland during the 1970s, the Society to Outlaw Pornography (STOP) and Committee Against Regressive Education (CARE) became influential due to the leadership of Rona Joyner. Following successes in removing a number of books from school libraries, these groups focused their attention upon the MACOS materials. The catalyst for active protests over this issue was provided by the visit of Norma Gabler to Queensland in July 1977. She was the guest speaker at functions held by the Festival of Light and the Conservative Club, and attended meetings with Queensland Department of Education directors. The outcome of this visit led to STOP and CARE mounting an intensive campaign against the MACOS materials during the last three months of 1977 by lobbying politicians and staging newsworthy events to provoke press releases. The media gave considerable coverage to the MACOS issue by providing a forum for both censorship and anti-censorship protagonists. In contrast, the campaign by anti-censorship groups, such as the Queensland Council of State School Organisations and the Queensland Teachers Union, proved to be ineffective during this period. As a consequence, the Minister of Education announced in January 1978 that the MACOS materials would be removed from Queensland schools. In spite of more vehement protests from anti-censorship groups following this announcement, the use of SEMP materials in Queensland schools was also censored in February 1978. This controversy led to the Queensland Cabinet appointing a Select Committee in February 1978 to inquire into these events. In its final report released in March 1978, the Select Committee recommended that the censoring of the MACOS and SEMP materials be continued.

Each of the three categories of research is represented by the works of Australian researchers. Most of the articles, however, represent the first group. Smith and Knight (1978: item 288), Duhs (1979: item 283), and Smith and Knight (1981: item 289) reported the MACOS and SEMP controversy in Queensland between 1977 and 1978 in terms of analysing the cultural connections between the protesters and the political elite, analysing the respective ideologies of the protagonists, or projecting scenarios for predicting outcomes from the controversy. O'Donnell (1980: item 286) presented evidence of the involvement of religious denominations in the controversy. Singh (1987: item 287) presented an analysis of a sequel to the MACOS and SEMP controversy; the attempt by CARE to censor curriculum materials produced by the Multicultural Education Curriculum Project through mounting a campaign between December 1983 and February 1984. Both the second and third groups are each represented by only one article:

Anderson (1978: item 280) presented guidelines for dealing with controversial issues; and Dellit (1986: item 282) considered the role of the teacher in censoring controversial materials.

2.3.3 Evolution Theory and Creationism

Although the dispute between evolution and creation reflects one aspect of censorship, evolutionists and creationists are recognisable protagonists whereas others involved in censorship protests come from diverse backgrounds. The teaching of evolution in American schools became a controversial issue following a campaign mounted by the World Christian Fundamentals formed in 1919. This campaign led to laws being enacted in Oklahoma, Florida and Tennessee making the teaching of evolution a criminal offense. A consequence of these enactments was the celebrated trial of John T. Scopes at Dayton, Tennessee in July 1925, which attracted national attention because of both the appearance of William Jennings Bryant and Clarence Darrow and the death of the former soon afterwards. The conviction of Scopes was seen as a victory for the creationists, and anti-evolution laws were passed in Mississippi in 1926, Arkansas in 1928 and Texas in 1929. Although the anti-evolutionist activity of the fundamentalists lost its drive during the 1930s, it had a marked effect upon the content of biology textbooks published between the early 1920s and 1960, by limiting the treatment of evolution.

The 1960s heralded a period of renewed activity from both creationists and evolutionists. The publication of the Biological Science Curriculum Study (BSCS) texts in 1960 drew protests from creationists in several states, most notably in Texas during 1964. The renaissance in creationist activity was largely sponsored by the Creation Research Society, founded in 1963 by Henry Morris. On the other hand, evolutionists sought to overturn the surviving restrictions against the teaching of evolution. The introduction of the BSCS texts into Arkansas schools in 1965 provided the opportunity to test that state's statute in the case of *Epperson v. Arkansas*. Arkansas teacher, Susan Epperson was successful in an appeal to the U.S. Supreme Court in 1968, which upheld that Arkansas' anti-evolution statute violated freedom of speech. This case was responsible for appeals against the remaining anti-evolution statutes in Tennessee in 1967 and Mississippi in 1970.

During the 1970s, the creationists concentrated upon seeking 'equal time' for creationist instruction and to presenting evolution as unproven theory. In 1970, Henry Morris founded the Creation Science Research Center in San Diego, California, to prepare instructional materials that presented the creationist perspective. This organisation attempted to influence the California State Board of Education into accepting 'balanced treatment', the Gablers were successful with similar demands in Texas, and the Arkansas and Louisiana legislatures enacted 'equal time' legislation in 1981. These laws were repealed in Arkansas in 1982 and in Louisiana in 1985 as a result of legal cases brought by the American Civil Liberties Union.

The reported research, annotated by Woodward et al. (1988) in this section, can

be divided into two groups. The first group described attempts by creationists or evolutionists to censor the content of science textbooks. Maeroff (1982) described the rejection by New York City schools of three biology textbooks because of inadequate treatment of evolution. Wade (1972) and Moore (1983) discussed the actions of the Creation Research Society in persuading the California State Board of Education to adopt textbooks including creationist explanations. Lewin (1984) and Moyer (1985) discussed the activity of the Gablers in influencing the Texas State Textbook Committee to adopt guidelines expressing 'balanced treatment', and the subsequent legal case brought by the People for the American Way. The second group traced the treatment of evolution or reported content analyses of its treatment in science textbooks. Christy (1937) and Hellman (1985) examined the treatment of evolution in biology textbooks published between the 1880s and the 1930s, finding a gradual increase in its frequency of treatment. Grabiner and Miller (1974), and Skoog (1979) examined the treatment of evolution in biology textbooks published between 1900 and the 1960s, finding that the treatment of evolution became more extensive after 1960. Skoog (1984), Rosenthal (1985), and Woodward and Elliott (1987) examined the treatment of evolution in biology textbooks published during the 1970s and early 1980s, finding a decline in the treatment of evolution when compared to texts published in the 1960s.

In 1975, members of the Institute of Creation Research, formed in 1972 from a schism within the Creation Science Research Center, visited Australia. This led to the development of a creationist movement in Australia which was formally established as the Creation Science Foundation at Brisbane in 1980. Of the two articles identified during the search, only Sperring (1986: item 291) provided an account of the development of creationism in Australia.

3. Conclusion

Elliott and Woodward (1990) drew five main conclusions from the study of the textbook in American schools reported in the Eighty-Ninth Yearbook of the National Society for the Study of Education. The intention here is to examine the implications of these conclusions for the Australian setting by referring to the findings derived from the body of research annotated in this bibliography.

In their first conclusion, Elliott and Woodward found from the study that commercially published textbooks form the main constituent of the curriculum in the core subject areas at the primary and junior secondary levels. Although contemporary textbooks are accompanied by various supplementary materials, there is little variation between competitive textbook series in the core subject areas. It is apparent from the preceding review that commercially published textbooks play a comparatively less important role in the curriculum of Australian schools. This conclusion can be attributed to evidence suggesting that, as late as the mid-1970s, the majority of textbooks used in Australian schools were imported. It is only recently that a commercial textbook publishing industry has developed in Australia. One cannot form judgements about the quality of the processes and products of this industry from the little reported research available. There is sufficient research evidence, however, to support the contention that Australia's national agency for curriculum development has

made an important contribution to the production and implementation of curriculum materials in Australian schools, thereby filling a void created by a less than effective commercial publishing industry.

In their second conclusion, Elliott and Woodward found that the important decisions regarding the content and instructional design of textbooks are made by publishers and selectors within a marketplace. This process involves a complex set of interactions between publishers' production and marketing procedures and users' adoption procedures, in which legislatures and state departments of education have set rules for interactions. It can be inferred that decision-making is performed by similar groups through a comparable set of interactions within the Australian setting. The reported research substantiates an opinion that interactions within the Australian marketplace are not governed by rules set by legislatures and state departments of education, thereby leaving Australian selectors and users with less capacity to negotiate with publishers over the content and instructional design of products than their American counterparts.

In their third conclusion, Elliott and Woodward found that curriculum reforms this century have neither had a substantial nor a lasting effect upon American public schools, and that textbooks have persisted as the main structures of school programs. The contention that multimedia materials packages, produced by the projects spawned by the curriculum reform movement in the United States, failed to replace conventional textbooks in American classrooms may not hold true in the Australian setting. Although there is no evidence that Australian researchers have reported time-series data on the continued use of materials produced by projects such as ASEP and SEMP, the findings of reported research studies in this area are more extensive than research into other aspects, suggesting that these projects for curriculum reform have had a substantial impact upon Australian education. This opinion can be supported by two other considerations: first, the curriculum reform movement affected Australian education during the 1970s, somewhat later than in the United States; and second, the national agency for curriculum development made an important contribution during this period to modifying the nature of curriculum reforms to suit prevailing Australian conditions in schools in spite of a less than effectual role played after 1981.

For their fourth conclusion, Elliott and Woodward stated that textbooks have been criticised recently for their lack of instructional quality. This lack of quality covers a range of issues: shallow coverage of a wide range of topics; inconsiderate text; emphasis upon memorising facts rather than problem-solving; avoidance of controversial topics; and the failure to promote adequate understanding of the nature of disciplines such as social studies or science. It can be inferred that similar flaws of instructional quality prevail in instructional materials used in Australian schools, although this cannot be confirmed because of the manifest lack of reported research into these aspects.

For their fifth conclusion, Elliott and Woodward asserted that many teachers in American schools would experience difficulty in maintaining quality of teaching and learning in the core subject areas without relying upon textbooks. Again, it

can only be inferred that Australian teachers are dependent to a similar extent upon the textbooks and other instructional materials they use in classrooms, because research studies into their use in Australian schools have not focused upon the issue of teacher dependence.

4. CURRICULUM REFORM IN AUSTRALIAN EDUCATION: THE IMPLICATIONS OF RESEARCH ON INSTRUCTIONAL MATERIALS

1. The Curriculum and Curriculum Materials of the Future

Elliott and Woodward (1990) proposed six propositions to serve a curriculum for the future that will ensure a positive impact upon schooling and the professionalism of teachers. In the first two propositions, they stated that curriculum development needs to be implemented at a local level with teachers being the main professional educators responsible for developing, implementing and assessing its effects. They asserted in subsequent propositions that the professional organisations to which teachers belong should be the main supports for local curriculum development and professional development of teachers with this leading to a revision of the roles of school administrators. The recognition by policy-makers during the late 1980s in both the United States and Australia, that success of educational reforms depends upon a shift from mandating school improvements through centralised bureaucracies of state departments of education to decentralising decision-making authority to school systems, has been a significant factor in setting the stage to accomplish these propositions. Therefore, this 'second wave' of reforms has established important preconditions, including a recognition by reformers that schools form complex social institutions, that the work of teachers is complex but limited in important ways so that proposed changes can represent challenges, and that teachers need to be given control over their conditions in order to be encouraged to change.

The remaining two propositions referred to the role of textbooks and instructional resources in the curriculum. Elliott and Woodward foresaw that the textbook will play an important role in the future, but a transition should be made in the curriculum of the future to three new dimensions: inclusion of content that is national; inquiry-oriented guides for both students and teachers to understand the academic disciplines underlying school subjects; and handbooks to support the development of students' understanding of particular areas such as writing and problem-solving. In their final proposition, Elliott and Woodward postulated that a wide range of instructional resources will need to be used in the curriculum of the future. Evidence abounds that existing curricula have not provided the conditions for teachers to use the full range of alternative media of instructional resources available. Kerr (1990) argued that the erratic use by teachers of audio-visual media of 'old' technologies introduced earlier this century is a consequence of several factors: situational constraints which make their use impractical; attitudinal problems based upon the assumption that such media provide only entertainment; and the difficulty of defining the skills of visual literacy. The widespread influx and use of computer-based technologies in education during the 1980s holds more positive promise that these technologies will gain a permanent place than the 'old' technologies by becoming the main aids to promote curriculum development and professional development of teachers. In this regard, two innovations hold promising futures: 'desk-top' publishing facilities available through word processors and laser printers provide the scope to generate teacher-made instructional materials; and computer

networks offer the potential through information databases for sharing a wide range of materials between schools, libraries and information centres.

The intent in the balance of this chapter is to determine the extent to which the direction of contemporary curriculum reform in Australia matches this scenario. The outcome of determining the extent of such a congruence is to specify a set of recommendations, derived from the review of topics on the research annotated in the bibliography, for educational authorities to enhance this match.

2. Collaboration between Federal and State Levels for Curriculum Reform

Collaboration for curriculum reform between the Commonwealth and state departments of education can be dated from 1968, when the Australian Commonwealth funded the Australian Science Education Project (ASEP). Such cooperation laid the foundations for the functions of the Curriculum Development Centre, which was established by the Australian Commonwealth in June 1973. The Curriculum Development Centre was allocated the functions of devising and developing school curricula and curriculum materials, undertaking, promoting and assisting in research into matters related to school curricula and curriculum materials, collecting, assessing and disseminating information relating to school curricula and curriculum materials, and arranging for the printing and publication of school curricula and curriculum materials.

During the period between 1973 and 1981, the greater part of the work of the Curriculum Development Centre was involved in coordinating projects such as the Australian Science Education Project (ASEP), the Social Education Materials Project (SEMP), and the Language Development Project (LDP). The success of this first period was muted during the 1980s, because political constraints and funding restrictions forced the Curriculum Development Centre to close between 1981 and 1984. When it was reconstituted in 1984 as one of the four divisions of the new Commonwealth Schools Commission, the new Curriculum Development Centre was required to collaborate with state education departments and other educational agencies on curriculum projects. This led to collaboration with the Australian Schools Catalogue Information Service (ASCIS), formed in 1984 to design a database for indexing information on instructional materials held in the collections of school libraries. This collaboration included the establishment in 1987 of a National Software Coordination Unit (NSCU) within the Curriculum Development Centre, for the purpose of collecting and storing evaluative information on computer courseware and computer-related instructional materials on the database established by ASCIS and disseminating this information to schools.

An agenda for reform of the Australian educational system was a major priority of the Labor government during the latter part of the 1980s. In 1985, a conference of directors-general of state education departments examined how national and state educational authorities could collaborate to the best effect through the Australian Education Council (AEC). The implications of these recommended changes were supported by the Minister for Employment, Education and

Training in his statement of May 1988, inviting cooperation from the states towards a national effort to strengthen the capacity of Australian schools (Dawkins, 1988). This statement presented a rationale for developing a curriculum framework for Australian schools to include common objectives which would also accommodate specific content to meet particular regional needs. In support of this statement, the Australian Education Council (1989) proposed seven initiatives: a set of ten national goals for schooling; publication of an annual national report on schooling; national collaboration in curriculum development; the establishment of a new national agency, the Curriculum Corporation, through the amalgamation of the Curriculum Development Centre and the Australian Schools Catalogue Information Service; use of a common handwriting style in Australian schools; establishment of a common age for school entry; and development of strategies to improve teacher education.

In July 1986, the Australian Education Council adopted the strategy of identifying and drawing up lists of activities and materials, either existing or being undertaken by educational authorities in eight curriculum areas: mathematics; science; technology; English and literacy; study of society; health, physical education and personal development; the arts; and languages other than English. Each of the state and territorial departments of education was given responsibility for a particular curriculum area. This work has been undertaken since 1988, and its scope has been surveyed and reported by the Curriculum Corporation (1991). The report categorises information surveyed according to the type of document, whether policy statements, syllabuses, curriculum guides, professional materials, or curriculum materials. A summary of the findings of the survey is described for each curriculum area.

The Australian Education Council endorsed the statement of a national framework for state and territorial departments of education to collaborate for curriculum development in mathematics education in December 1990. The survey identified relatively few documents of each type, with most activity in the development of curriculum materials confined to the RIME project. Responses by educational authorities indicated that collaborative activity in the area of mathematics should focus upon developing curriculum materials for chance and data, the application of computer-based technologies in mathematics, and the development of assessment materials.

The survey indicated several educational authorities were developing curriculum guides and curriculum materials for science programs, but attention needed to be directed towards developing a statement for a national framework in science education. Responses to the survey indicated that collaborative activity should be directed towards producing curriculum materials which support a science-technology-society approach, and preparing plans to improve the professional development of science teachers.

The survey identified a lack of clarity and direction in the area of technology education, pending the adoption by the Australian Education Council of the statement of a national framework for collaboration in technology. The survey identified a moderate quantity of documents in the area of technology with most

being syllabuses and curriculum materials. Although all educational authorities are involved in a wide variety of activities in technology education, consensus in areas for collaboration was not identified from the survey.

In the area of English and literacy, an extensive variety of documents, especially curriculum materials, was identified. Responses to the survey indicated a consensus that curriculum collaboration should be directed towards developing curriculum materials to support programs for English as a second language targeted at students of non-English speaking backgrounds.

The survey identified an extensive quantity of documents of each type in the area of the study of society. Although each educational authority is involved in a variety of diverse activities, they appear to lack cohesion and direction. Responses to the survey indicated a consensus that curriculum collaboration should be directed towards developing curriculum materials for environmental, Aboriginal and Asian studies.

The survey identified an extensive variety of developmental activities occurring in the area of health, physical education and personal development, particularly the development of curriculum guides by four educational authorities. Responses to the survey indicated that collaborative activity should be directed to developing a statement for a national framework which would provide direction and cohesion.

The survey identified an extensive variety of activities in the area of the arts covering all types of documents, and including databases of research information and professional materials. The survey identified that likely topics for collaborative activity could be the development of programs for the senior secondary level.

Responses to the survey indicated that activities in the area of languages other than English were concentrated upon the development of syllabuses, curriculum materials and assessment materials. Although the Commonwealth already funds the Australian Second Language Learning Program and the Asian Studies Council coordinates some collaborative activities, it is anticipated that the statement of a national curriculum framework would improve coordination during implementation of existing programs.

The findings of the survey indicated that the capacity for collaborative activities is more developed in certain curriculum areas, namely mathematics, science, and languages other than English, than in the other areas. Participating educational authorities recognised that collaborative activities in curriculum development are important in the area of technology education and the application of computer-based technologies to other areas, particularly mathematics and science.

It can be concluded that the basic direction the common curriculum framework is taking does match the propositions put forward by Elliott and Woodward for the curriculum for the future. This conclusion must be qualified by the

rudimentary condition in which the common curriculum framework is presently defined. It also needs to be taken into account that the force directed towards centralisation, expressed in the intention by educational authorities to collaborate in developing and implementing a common curriculum framework, is balanced by forces acting to reform centralised state bureaucracies by transferring decision-making to schools. Such reforms have occurred in Western Australia in 1987, New South Wales in 1989 and Tasmania in 1990, but need to be extended nationally. It remains to be seen whether educational authorities in Australia are capable of balancing the simultaneous actions of these forces for centralisation and decentralisation so that the essential element of teacher-centred professionalism becomes the predominant means for curriculum reform.

3. Findings and Recommendations from the Review

It is apparent from this discussion that the curriculum role of instructional materials, and their relationship to teaching and learning and educational policy making, will form a significant element of the common curriculum framework for Australian schools. For instance, the Curriculum Corporation is likely to refine the aspects of its database of information on curriculum products and clearinghouse facilities associated with the Australian Curriculum Information Network (ACIN), so as to match the needs of the common curriculum framework.

The review indicates a variety of omissions and deficiencies in research purposes, methodologies and results employed to investigate the various aspects of instructional materials within the Australian setting, when compared with the American approaches. Therefore, it is essential for Australian researchers to apply different approaches to research in order to broaden the base of knowledge about the various aspects of instructional materials in Australian schools. Comparisons are drawn below between the findings of Australian and American research for each aspect, followed by recommendations.

(a) Use and Curriculum Role: Several important American research studies have investigated the curriculum role of textbooks, reporting that both teachers and students depend upon them extensively. This review of Australian research has identified that there are no comparable studies investigating the curriculum role of instructional materials in Australian classrooms. Australian research studies have been directed to describing patterns of dissemination, management and use of instructional materials within schools. It is forecasted that the design for such investigations would need to employ correlational methods rather than surveys or case studies.

It is recommended that research is undertaken on the extent to which Australian teachers and students depend upon instructional materials so that issues relating to their quality and effects upon teaching and learning can be better understood.

(b) Selection: American researchers have identified various inequities in the mandated policies that various educational authorities use to select and adopt

textbooks. Recent research studies are now focused upon identifying and developing more valid and reliable practices for selecting textbooks. The lack of Australian research in this area underscores the inadequate means applied to select instructional materials used in Australian schools, and supports the contention that both Australian teachers and educational authorities have a poor appreciation of what is an organised process for selecting instructional materials.

It is recommended that research is undertaken to determine more valid and reliable decision-making processes for selecting instructional materials in Australian educational settings. Such research should take account of the findings of American research in this aspect.

(c) The Publishing Industry: Very little research has been reported on the commercial publishing industry in either the United States or Australia. Whilst there has been some research on the design, and learner verification and revision of instructional materials in both Australia and the United States, research findings have not been applied generally in either country to improve the match between materials and learners.

It is recommended that research is undertaken into the functions of the commercial publishing industry in Australia, and to developing guidelines for field-testing instructional materials.

(d) Innovation and Reform: The survey of Australian research about the products of reform and innovation identified a marked decrease in such research after 1980. The extant research is restricted to studies undertaken either on the processes involved in developing, disseminating and implementing instructional materials or on surveying the subsequent use of these products. In contrast to the American setting, there is a lack of research that provides time-series data indicating changes in the extent to which the products of these reform efforts are used.

It is recommended that research is undertaken in two areas: providing time-series data on the use of instructional materials produced in the ASEP and SEMP; and providing studies on the use of instructional materials produced in current efforts at curriculum reform being coordinated by the Curriculum Corporation.

(e) General References: Comparatively few references by Australian authors were identified in each of three areas: research relating to the analysis of instructional materials; research relating to the collection, synthesis and dissemination of information on instructional materials; and research examining the application of evaluative procedures to instructional materials.

It is recommended that research is undertaken in each of these areas, taking account of past and present research by American authors.

(f) Readability: Research by American authors has recognised that readability formulas are not valid measures of all aspects of text readability, and current research is directed towards formulating more valid measures, such as text

considerateness. There is no evidence that research by Australian authors has taken account of this most recent development.

It is recommended that current developments into research on text readability are taken into account by Australian researchers.

(g) Treatment of Minorities and Women: It is evident that research studies by American authors into racism and sexism in instructional materials are extensive. Comparatively few research studies have been reported by Australian authors.

It is recommended that systematic research studies are undertaken into racism and sexism within instructional materials used in Australian schools.

(h) Subject Matter Content Coverage: Research studies reported by American authors on the content coverage of instructional materials in each of five subject areas, except language arts, are extensive. Very few research studies by Australian authors have been undertaken into content coverage of instructional materials in these subject areas, except for science.

It is recommended that systematic research is undertaken on the content coverage of instructional materials used in specific subject areas.

(i) Ideology and Instructional Materials: The reported research indicates that Australian authors have investigated the philosophical and ideological emphases that authors give to the subject matter in instructional materials more extensively than American authors.

It is recommended that the findings of this research are taken into account by authors and developers of instructional materials used in Australian schools.

(j) Controversy and Censorship: Most American research reported on controversy and censorship has either described censorship issues or investigated legal implications, whilst research on assigning responsibility for censorship is not extensive. A similar conclusion can be stated about the elements of Australian research on controversial issues in instructional materials and censorship.

It is recommended that research is undertaken on what is appropriate knowledge for children of different ages, on the responsibilities of parents in determining what sorts of knowledge their children should be exposed to, and on the role of teachers and educational policy-makers in intervening in demands from various groups.

(k) Evolution Theory and Creationism: Research studies by American authors have reported evidence that creationists have influenced the coverage of evolution in textbooks. There is no evidence of comparable research reported by Australian authors.

It is recommended that research is undertaken to substantiate the extent to which evolution is treated in science materials used in Australian schools.

LIST OF PERIODICALS

Aboriginal Child at School
The Editor, Department of Education, University of Queensland, St Lucia, Qld 4067

ACES Review
Australian Council for Educational Standards, PO Box 118, Bentleigh, Vic 3204

The ACHPER National Journal
Australian Council for Health, Physical Education and Recreation, 214 Port Road, Hindmarsh, SA 5007

Agora
History Teachers Association of Victoria, 402 Smith Street, Collingwood, Vic 3066

Australasian College Libraries
Library, South Australian College of Advanced Education, Holbrooks Road, Underdale, SA 5032

The Australian Administrator
The Editor, School of Education, Deakin University, Waurn Ponds, Vic 3217

Australian Journal of Adult Education
Australian Association of Adult Education, GPO Box 1346, Canberra, ACT 2601

Australian Journal of Early Childhood
Australian Early Childhood Association, PO Box 105, Watson, ACT 2602

Australian Journal of Education
Australian Council for Educational Research, PO Box 210, Hawthorn, Victoria 3122

Australian Journal of Educational Technology
Professional Development Centre, University of New South Wales, PO Box 1, Kensington, NSW 2033

Australian Journal of Reading
Australian Reading Association, PO Box 78, Carlton South, Vic 3053

Australian Journal of Remedial Education
Australian Remedial Education Association, Australian Special Book Services, 319 High Street, Kew, Vic 3101

Australian Journal of Social Issues
Australian Council of Social Service, PO Box 45, Railway Square, Sydney, NSW 2000

Australian Journal of TAFE Research and Development
TAFE National Centre for Research and Development, 252 Kensington Road, Leabrook, SA 5068

Australian Library Journal
Australian Library and Information Association, 376 Jones Street, Ultimo, NSW 2007

Australian Mathematics Teacher
Australian Association of Mathematics Teachers, 20 Kookaburra Street, Kenmore Hills, Qld 4069

Australian School Librarian
School Library Association of Victoria, PO Box 280, East Melbourne, Vic 3002

Australian Science Teachers Journal
Australian Science Teachers Association, Science and Mathematics Education Centre, Curtin University of Technology, GPO Box U1987, Perth, WA 6001

Australian Teacher
The Editor, PO Box 415, Carlton South, Vic 3053

Babel
Australian Federation of Modern Language Teachers' Associations, PO Box 216, Belgrave, Vic 3160

British Journal of Educational Technology
National Council for Educational Technology, Sir William Lyons Road, University Science Park, Coventry CV4 7EZ, UK

British Journal of Sociology of Education
Division of Education, University of Sheffield, Sheffield S10 2TN, UK

Children's Libraries Newsletter
superseded by Orana

Curriculum and Research Bulletin
Ministry of Education, Victoria, GPO Box 4367, Melbourne, Vic 3001

Curriculum and Teaching
James Nicholas Publishers, PO Box 244, Albert Park, Vic 3206

Curriculum Development in Australian Schools
Curriculum Development Centre, PO Box 34, Woden, ACT 2606

Curriculum Inquiry
Ontario Institute for Studies in Education, 252 Bloor Street W, Toronto, Ontario M5S 1V6, Canada

Curriculum Perspectives
Australian Curriculum Studies Association, School of Education, Murdoch University, Murdoch, WA 6150

Discourse
Department of Education, University of Queensland, St. Lucia, Qld 4067

Distance Education
Australian and South Pacific External Studies Association, Darling Downs Institute Press, Darling Downs Institute of Advanced Education, PO Darling Heights, Toowoomba, Qld 4350

Early Years
ACT Department of Education, Macarthur House, PO Box 20, Civic Square, ACT 2608

Education (NSW)
New South Wales Teachers Federation, 300 Sussex Street, Sydney, NSW 2000

Education (WA)
Ministry of Education, Western Australia, 151 Royal Street, East Perth, WA 6000

Education and Society
James Nicholas Publishers, PO Box 244, Albert Park, Vic 3206

Education Links
Education Links Collective, 37 Cavendish Street, Stanmore, NSW 2048

Education News
The Editor, PO Box 826, Woden, ACT 2606

Education Research and Perspectives
The Editor, Department of Education, University of Western Australia, Nedlands, WA 6009

Educational Magazine
Curriculum Branch, Ministry of Education,Victoria, 234 Queensbury Street, Carlton, Vic 3053

English in Australia
Australian Association for the Teaching of English, PO Box 203, Norwood, SA 5067

Ethnic Studies
superseded by the Journal of Intercultural Studies

Ethos
Victorian Association of Social Studies, PO Box 91, Balaclava, Vic 3183

European Journal of Science Education
superseded by the International Journal of Science Education

The Forum of Education
Sydney College of Advanced Education, PO Box 375, Waterloo, NSW 2017

Geographical Education
Australian Geography Teachers Association, School of Geography, Queensland University of Technology, Locked Mail Bag No. 2, Red Hill, Qld 4059

Gifted Education International
AB Academic Publishers, PO Box 97, Berkhamsted, Herts HP4 2PX, UK

Harvard Educational Review
Gutman Library Suite 349, 6 Appian Way, Cambridge, MA 02138,USA

Higher Education Research and Development
Centre for Learning and Teaching, The University of Technology Sydney, PO Box 123, Broadway, NSW 2007

History of Education Review
Australian and New Zealand History of Education Society, Faculty of Education, Monash University, Clayton, Vic 3168

The History Teacher
Queensland History Teachers Association, Brisbane Education Centre, PO Box 84, Red Hill, Qld 4004

Idiom
Victorian Association for the Teaching of English, PO Box 265, Carlton South, Vic 3053

Institute of Public Affairs Review
Institute of Public Affairs, 83 William Street, Melbourne, Vic 3000

International Journal of Science Education
Department of Education, University of Keele, Keele, Staffordshire ST5 5BG, UK

Journal of Art and Design Education
National Society for Education in Art and Design, 7A High Street, Corsham, Wiltshire SN13 0ES, England

Journal of Curriculum Studies
Department of Curriculum and Instruction, University of Illinois at Urbana-Champaign, 341 Armory Building, 505 East Armory Avenue, Champaign, IL 61801, USA

The Journal of Educational Administration
University of New England, Armidale, NSW 2351

Journal of Educational Research
Heldref Publications, 4000 Albemarle Street NW, Washington, DC 20016, USA

Journal of Intercultural Studies
The Editor, Centre for Migrant Studies, Monash University, Clayton, Vic 3168

Journal of Reading
International Reading Association, PO Box 8139, Newark, DE 19714, USA

Journal of Research in Science Teaching
National Association for Research in Science Teaching, 223-E Peabody, Louisiana State University, Baton Rouge, LA 70803, USA

Journal of the School Library Association of Queensland
School Library Association of Queensland, PO Box 997, Toowong, Qld 4066

Journal of Science and Mathematics Education in Southeast Asia
SEAMIO Regional Centre for Education in Science and Mathematics, Glugor, Penang, Malaysia

Lab Talk
Science Teachers Association of Victoria, Clunies Ross House, 191 Royal Parade, Parkville, Vic 3052

Language in Society
10 Stamford Road, Oakleigh, Melbourne, Vic 3166

Modern Teaching
Modern Teaching Methods Association, PO Box 243, Croydon, Vic 3136

Narration
Victorian Commercial Teachers Association, 33-37 Hotham Street, Collingwood, Vic 3066

New Education
James Nicholas Publisher, PO Box 244, Albert Park, Vic 3206

Orana
The Editor, 9 Lawley Road, Lesmurdie, WA 6076

Physics Education
Institute of Physics Publishing Ltd., Techno House, Redcliffe Way, Bristol BS1 6NX, UK

Pivot
Education Department of South Australia, GPO Box 1152, Adelaide, SA 5001

Polycom
Ministry of Education, Victoria, GPO Box 4367, Melbourne, Vic 3001

Primary Education
The Editor, 25-27 Huntingdale Road, Burwood, Vic 3125

The Primary Journal
Studies Directorate, New South Wales Department of Education, GPO Box 33, Sydney, NSW 2001

Prospect
National Centre for English Language and Teaching Research, Macquarie University, NSW 2109

Quest
Production and Publishing Services Branch, Queensland Department of Education, PO Box 33, North Quay, Qld 4000

Radical Education Dossier
superseded by Education Links

Reading Around
Australian Reading Association, PO Box 78, Carlton, Vic 3053

Reading Education
Mitchell College of Advanced Education, Bathurst, NSW 2795

The Reading Teacher
International Reading Association, PO Box 8139, Newark, DE 19714, USA

Review
School Libraries Branch, Education Department of South Australia, GPO Box 1152, Adelaide, SA 5001

Review Bulletin
The Editor, Statewide School Library Support Centre, 67 High Street, Prahan, Vic 3181

Rhombus
Mathematical Association of Western Australia, University of Western Australia, Nedlands, WA 6009

SASTA Journal
South Australian Science Teachers Association, 163A Greenhill Road, Parkside, SA 5063

School Library Bulletin
Library and Education History Service, Ministry of Education, Victoria, GPO Box 4367, Melbourne, Vic 3001

Science Education
John Wiley & Sons, 605 Third Avenue, New York, NY 10158, USA

Scios
Science Teachers Association of Western Australia, PO Box 991, West Perth, WA 6005

Secondary Library Newsletter
Catholic Education Office, PO Box 217, Leichhardt, NSW 2040

Set
Australian Council for Educational Research, PO Box 210, Hawthorn, Vic 3122; New Zealand Council for Educational Research, PO Box 3237, Wellington, NZ

Social Education
National Council for the Social Studies, 3501 Newark Street NW, Washington, DC 20016, USA

The Social Studies
Heldref Publications, 4000 Albemarle Street NW, Washington, DC 20016, USA

South Australian Journal of Educational Research
Education Department of South Australia, GPO Box 1152, Adelaide, SA 5001

Studies in Educational Evaluation
Pergamon Journals, Maxwell House, Fairview Park, Elmsford, NY 10523. USA

Study of Society
Victorian Advisory Committee on the Teaching of the Social Studies, PO Box 91, Balaclava, Vic 3183

Teachers College Record
Teachers College, Columbia University, 525 West 120 Street, New York, NY 10027, USA

Teaching History

Teaching of English
English Teachers Association of New South Wales, PO Box 187, Rozelle, NSW 2039

Unicorn
Australian College of Education, PO Box 323, Curtin, ACT 2605

VAT
Victorian Affiliated Teachers Federation, PO Box 200, Glen Waverley, Vic 3150

1. PRODUCERS AND CONSUMERS

1.1 Instructional Materials and School Programs

1.1.1 Use and Curriculum Role

001 Anderson, J.
A National Survey of User Opinion of Commonwealth produced Curriculum Materials for teaching English as a Second Language
Canberra, ACT: Australia Department of Education (1981)
Reports the findings of a survey of teachers and consultants in Queensland, New South Wales, Victoria and South Australia on the value and appropriateness of three materials, *Learning English in Australia, Transit Red* and *Transit Green*, produced by the Language Teaching Branch of the Commonwealth Department of Education for English as a second language. The findings indicated that the materials are widely used and valued by teachers.

002 Andreana, C.
Report on the Applicability of the ALL (Australian Language Levels) Guidelines in Victorian Primary and Post-primary Schools
Melbourne, Vic: Victoria Ministry of Education (1988)
Reports a study in which the Australian Language Levels Guidelines were field-tested with all teachers of Italian in primary and secondary schools in Victoria. The findings indicated that the guidelines provided useful support.

003 Brown, A.J., Kenworthy, B.R., Davies, A. and Hannaford, K.
The Provision, Organisation and Utilisation of Learning Resources in TAFE Colleges
Adelaide, SA: Department of Technical and Further Education (1982)
Reports a study in which six colleges of technical and further education, two each in South Australia, Tasmania and Victoria, were surveyed to identify the processes whereby instructional materials were provided by centralised and college production agencies, the processes whereby instructional materials were organised and managed within college libraries and resource centres, the suitability of these facilities, and the extent of use of instructional materials by teachers and students. The findings indicated that respondents to the survey viewed the provision, management and use of instructional materials as a low priority.

004 Clyde, A.
'How students use distance teaching materials: an institutional study'
Distance Education, 4: 1, 4-26 (1983)
Reports a study, in which diaries were used by a sample of students, to identify ways they used instructional materials, especially in relation to use of time, range of materials consulted, self-assessment activities undertaken, and the sequence in which materials were studied.

005 Codrington, S.
'Textbooks: class sets vs. set texts'
Geographical Education, 5: 1, 5-7 (1985)
Presents the views of three secondary teachers regarding the use of textbooks in geography programs.

006 Cornbleth, C.
'Old versus new curriculum materials use in science and social studies'
Curriculum Perspectives, 2: 2, 25-33 (1982)
Reports a study of the proportion of instructional time that instructional materials of varying media, analysed by the Annehurst Curriculum Classification System, were used in 'old' and 'new' science and social studies programs in two elementary schools in the

United States.

007 Dunlop, R.
To what Extent have Sourcebooks helped Teachers to implement the Years 1-10 Mathematics Syllabus? An Evaluation Report
North Quay, Qld: Queensland Department of Education (1989)
Reports a study of the perceptions held by a sample of 28 mathematics teachers about their use of teacher's guides, developed by the Queensland Department of Education, and instructional materials in a mathematics program. Found that primary teachers perceived the guides to be valuable for implementing the mathematics program, but that the guides were of little value to secondary teachers because of their general use of textbooks.

008 Education News
'ESL materials survey'
Education News, 17: 9, 40-41 (1981)
Reports a summary of item 001.

009 Gardner, P.L.
'Road safety education in a science course: evaluation of Science and the Road'
Studies in Educational Evaluation, 15: 1, 73-89 (1989)
Reports a study in which the use of a curriculum material for road safety, produced by the Road Traffic Authority in Victoria, was assessed by surveying a sample of Victorian teachers, administering a set of tests and attitude scales to measure student achievement, and by applying a quasi-experimental design to compare the attitudes and knowledge of samples of users and non-users. The findings resulted in the revision of the material and the provision of inservice training for teachers.

010 Gerber, R.V.
'Audiovisuals in geography'
Geographical Education, 3: 1, 25-42 (1977)
Describes approaches for using various audiovisual media, and discusses ways of using audiovisual media in geography programs, including for student assessments.

011 Gunter, A.
'The politics of textbooks: a philosophy sketched, and some implications applied to junior secondary texts'
Idiom, 15: 2, 11-21 (1980)
Describes a model for using textbooks within an educational program, and applies it specifically to several English language textbooks and reading materials.

012 Gunter, A.
'Learning materials and multicultural education'
Polycom, 31, 9-11 (1982)
Discusses issues relating to the use of culturally biassed or adapted materials with students from non-English speaking backgrounds.

013 Hannon, S.
'ESL learning and teaching materials: an investigation of their use in AMES, SA'
Prospect, 1: 3, 86-100 (1986)
Reports a study conducted by the Adult Migrant Education Services in Adelaide, South Australia, using a two-stage research design in which loans of instructional materials and professional materials from a resource centre and the copying of materials for classroom use at two other sites, were surveyed. The findings indicated that materials for listening comprehension, and those produced in Australia, were most used.

014 Jonsson, N.
'Conversation in language lab with slides'

Babel, 22: 3, 36-38 (1987)
Describes an approach for using a language laboratory with remote control and slide projection equipment as a means of practising conversation with advanced, second language learners.

015 Kennedy, K.J.
'Providing materials does not guarantee their use'
Curriculum Development in Australian Schools, 1, 11-13 (1985)
Describes a survey of principals, teacher-librarians and teachers at three Western Australian schools on their use of a curriculum material, *Seventeen Australian Families*, produced by the Curriculum Development Centre and Qantas.

016 Marland, P., Patching, W., Putt, I. and Store, R.
Learning from Distance-teaching Materials: A Study of Students' Mediating Responses
Townsville, Qld: James Cook University of North Queensland (1983)
Reports a study to identify the types and origins of students' mediating responses to instructional materials by videotaping subjects during study sessions followed by audiotaping stimulated-recall interviews. The findings identified that particular textual features prompted the intellectual processes involved in learning.

017 Marland, P., Patching, W., Putt, I. and Store, R.
'Distance learners' interaction with text while studying'
Distance Education, 11: 1, 71-91 (1990)
Reports a summary of item 016.

018 Marsh, C.J.
'Teachers' knowledge and use of social studies curriculum materials in public elementary schools'
Journal of Educational Research, 77: 4, 237-243 (1984)
Reports a summary of item 020.

019 Marsh, C.J. and Kennedy, K.J.
'Evaluating the implementation of federally sponsored English as a second language (ESL) curriculum materials'
Studies in Educational Evaluation, 15: 1, 109-139 (1989)
Reports a study in which samples of teachers and students in each Australian state and territory were surveyed on their perceptions about their use of two curriculum materials developed by the Commonwealth Department of Education for programs in English as a second language. The findings indicated that moderate use of the materials was being made in the schools surveyed.

020 Marsh, C.J., Willis, S., Newby, .H., Deschamp, P. and Davis, B.P.
Selection and Distribution of Curriculum Materials
(Co-operative Research Series Report No. 5)
East Perth, WA: Education Department of Western Australia (1981)
Reports a study, using a three-stage research design of case studies and representative interviews as a means to formulate items for a final questionnaire, which was used to survey samples of teachers and principals in Western Australian primary schools on their perceptions of the processes used to disseminate, select and use curriculum materials. The findings indicated that they were not actively involved in these processes. Also identifies constraints in the educational system responsible for this situation, and recommends six actions to improve the processes whereby curriculum materials are disseminated, selected and used in Western Australian schools.

021 Marsh, C.J., Willis, S., Newby, J.H., Deschamp, P., and Davis, B.P.
'Teachers' perceptions about the selection, distribution and use of social studies and mathematics curriculum materials within a state education system'
Journal of Curriculum Studies, 17: 1, 49-61 (1985)

Reports a summary of item 020.

022 Morrison, J.
'A decade of videos in the language classroom: questions and some answers'
Babel, 22: 1, 3-7 (1987)
Reviews research findings about the use of video recorded materials in second language instruction. Concludes that research should be directed to the issues of selection, classroom preparation, instructional implications, cost effectiveness of developing video materials.

023 Nunan, D.
Language teaching course design: trends and issues
Adelaide, SA: National Curriculum Resource Centre (1985)
Examines the elements of curriculum design in terms of adult migrant education programs. Considers the use of authentic materials with the target group of learners.

024 Oates, C., Gunstone, D., Northfield, J. and Fensham, P. (eds.)
Science Education: Australian Practices and Perspectives
(Culture and Curriculum Series)
Canberra, ACT: Curriculum Development Centre (1979)
Reports some effects of ways ASEP materials have met individual differences within the student population, identifies the curriculum role of instructional materials within science education in Australian schools, and recommends approaches for using instructional materials in science education.

025 Rado, M.
Teaching in the Multilingual Classroom
Canberra, ACT: Curriculum Development Centre (1984)
Describes an instructional model for developing and using instructional materials for multilingual and multicultural education programs. Presents guidelines for teachers to develop or adapt culturally relevant materials, discusses methods for using multilingual multicultural materials in the context of student-centred learning, and the use of multilingual materials in language teaching.

026 Roe, E.
Using and Misusing the Materials of Teaching and Learning
(Education Research Unit Occasional Report Series No. 6)
Canberra, ACT: Australian National University (1975)
Reports four studies on the curriculum role and selection of instructional materials in preservice teacher education programs in nine Australian institutions of higher education.

027 Tasmania Department of Education
Learning Resources Review
Hobart, Tas: Tasmania Department of Education (1990)
Reports a study of the processes involved in disseminating and organising instructional materials in a sample of seventeen schools and twenty-five resource centres in Tasmania. The findings identified that dissemination of instructional materials was most effective where group decision-making occurred, and the best organisation of collections of instructional materials occurred through use of a computer-based management system.

028 Thurlow, G.R.
1984 Survey of Computer Software used in State Secondary Schools: Stage 2
North Quay, Qld: Queensland Department of Education (1988)
Reports the second stage of a study, in which computer coordinators in 217 state secondary schools in Queensland were surveyed about their use of computer courseware according to curriculum area, sources and learning outcomes. The findings indicated that most use of computer courseware was made in mathematics, with the main source being commercial,

and that the learning of factual skills rather than higher order processes was promoted .

029 Wilson, L.
'City kids: a multilingual experience-based program in Australia'
The Reading Teacher, 32, 674-676 (1979)
Discusses the use of a series of basal reading materials, published in English and several community languages, at a primary school in Victoria.

1.1.2 Selection

030 Borthwick, J.
'The selection of textbooks: source books and course books for the English classroom'
English in Australia, 61, 3-21 (1982)
Examines decision-making issues that face individual teachers concerning the selection and adoption of textbooks for language arts programs. Recommends that selection of a textbook be based upon three criteria: its ideological base; its content; and its role in classroom transactions.

031 Brimble, R.A.
'A guide to selecting reading materials'
Australian Journal of Reading, 4: 4, 173-178 (1981)
Outlines a set of criteria for selecting reading materials.

032 Brimble, R.A.
'Who selects reading materials?'
Australian Journal of Reading, 4: 4, 199-203 (1981)
Reports the findings of a survey of a sample of teachers' attitudes towards consulting various groups in the selection of reading materials, and on the appropriateness of applying particular selection criteria.

033 Bunbury, R., Corcoran, B. and Ross, K.
'Power-choice over the English curriculum'
Australian Journal of Reading, 7: 4, 181-195 (1984)
Reports the findings of a survey of a sample of 492 teachers on their perceptions of decision-making authority in determining the content of language arts programs, and the balance between teacher and student involvement in selecting reading materials.

034 Comber, B.
'Self-selecting and reading with purpose'
Reading Around, 9: 4, 91-94 (1981)
Suggests student selection of reading materials is compatible with improving students' attainments in reading, and skills in selecting materials.

035 Crewe, J.
'Selecting curriculum materials K-12'
Orana, 17: 4, 153-157 (1981)
Presents a holistic approach for selecting instructional materials of varying media, and recommends procedures for selecting and managing collections of instructional materials in school libraries.

036 Derrick, H.
Choosing books for children'
Early Years, 2: 1, 12-16 (1977)
Suggests that selection by parents of reading materials be based upon criteria that appeal most to young children, such as physical attributes and story plots.

037 Fincher, B.
'Selection of materials in the school setting'

Australian School Librarian, 19: 3, 85-86, 99 (1982)
Reports a study of the use of selection policy statements at 69 school libraries in Victoria. The findings indicated that only 21 school libraries used published selection policies.

038 Fish, G.
'Specifying curriculum materials'
Lab Talk, 21: 6, 2-7 (1977)
Suggests that the selection of curriculum materials should be guided by the need to meet the aims, learning strategies and content of educational programs, and take account of student development.

039 Giddings, G.
'Science textbooks in W.A.: what's happening?'
Scios, 33: 3, 17-26 (1988)
Reports a study in which 140 science teachers at 80 secondary schools in Western Australia were surveyed on their use of professional materials for classroom preparation, on the textbooks they selected, and on the criteria they used for selection and the responsibility for selection decisions. Found that textbooks were a principal vehicle through which teachers attempted to build teaching strategies, that teachers failed to discriminate in their textbook selections, and that teachers wanted the responsibility for selecting their own textbooks.

040 Gunter, A.
'Mixed ability classes - choosing and organising learning materials'
Australian Journal of Remedial Education, 11: 3, 18-28 (1979)
Discusses the case for taking account of transactional variables when selecting instructional materials, and recommends that selection of an instructional material is based upon three criteria: its fit to an instructional program; the sequence and scope of its contents; and its match to instructional objectives.

041 Gunter, A.
'Choosing and organising learning materials'
Study of Society, 10: 2, 4-5 (1979)
Presents a rationale for developing, selecting and modifying instructional materials, and discusses the implications of five variables: the needs of students; the learning environment; teaching style; continuous modification of materials; and evaluation of materials.

042 Gunter, A.
'Transactions with textbooks or person to person'
Idiom, 16: 4, 14-25 (1981)
Specifies a set of guidelines for selecting textbooks that will lead to the engagement of learners, and applies the guidelines to several English language textbooks.

043 Gunter, A.
'Guidelines for choosing books and course materials'
English in Australia, 65, 3-8 (1983)
Outlines criteria by which to select both reading materials and textbooks for language arts programs.

044 Hayes, T.
'Scenario three: suggested guidelines for choosing'
Idiom, 20: 2, 6-7 (1985)
Recommends that selection of reading materials encompasses a set of guidelines.

045 Hemmings, B. and Battersby, D.
'Textbook selection: evaluative criteria'
Higher Education Research and Development, 8: 1, 69-8 (1989)

Describes an instrument, the Textbook Selection Checklist, developed from an empirical base, and reports its trialling through assessment of the relative merits of introductory and educational psychology textbooks for higher education.

046 Hoffman, L. and Kenworthy, C.
'Using reader-choice of books to promote reading: West Australian Young Readers' Book Award'
Australian Journal of Reading, 4: 2, 96-100 (1981)
Describes the procedures whereby students' attitudes were used to judge reading materials entered for the West Australian Young Readers' Book Award.

047 Huntington, J.F.
'Microcomputer software selection'
New Education, 7: 1 and 2, 73-77 (1985)
Discusses the issues of expert advice, degree of fit between hardware and software, the use of integrated software packages, intersystem compatibilities, file structures and transportability, and vendor support when selecting microcomputer software for either classroom or non-classroom use.

048 Hyland, L.
'Selecting (fiction) books for Aboriginal children'
VAT, 4: 12, 22-23, 25 (1979); *Polycom*, 25, 24-27 (1980)
Discusses a process and criteria to be used for selecting reading materials for Aboriginal Australians, and presents examples of materials that are recommended and not recommended.

049 Jaunay, G.R.
'Selecting books for Aboriginal children'
Aboriginal Child at School, 6: 5, 30-32 (1978)
Discusses variables affecting the selection of reading materials for Aboriginal Australian children.

050 Jeffery, P.
Curriculum Materials Review Guide
Hawthorn, Vic: Australian Council for Educational Research (1976)
Presents a rationale statement, notes for reviewers, and a five-page Review Guide for evaluating curriculum materials comprising seven sections: review identification; purpose and basis; teacher's guide; scope and sequence; methodology; student evaluation; and overview.

051 Kaye, J.M.
'Considerations in the selection of instructional media'
Forum of Education, 39: 3, 17-20 (1980)
Discusses criteria, such as clarity, ease of use, student response and feedback, by which audiovisual media can be selected.

052 Kirk, J.
The Influence of Format on Children's Book Choices: A Research Report
(Occasional Monograph No. 2)
Wagga Wagga, NSW: Riverina-Murray Institute of Higher Education (1985)
Reports a study of the effects that the physical attributes of reading materials have upon their selection by a sample of third through sixth graders in New South Wales schools. The findings identified that physical attributes, in particular cover illustrations, were used by most subjects for selections.

053 Kirk, J.
'Children's book choices: the influence of format"
Orana, 22: 4, 180-184 (1986)

Reports a summary of item 052.

054 Krister, L.
'Evaluating instructional packages'
Australian Journal of Adult Education, 24: 1, 11-17 (1984)
Presents a set of instruments for evaluating training materials, which commences with the selection of media formats and then provides guidelines for deciding whether a given resource is suited in terms of its organisation, content and appropriateness.

055 Langrehr, J.
'How do you select curriculum materials?'
Curriculum Perspectives, 3: 1, 31-36 (1983)
Describes the Annehurst Curriculum Classification System, used to classify curriculum materials in terms of learner aptitudes such as intelligence, experience, motivation, emotion-personality, creativity, verbal expression, and visual, aural and motor perception. Recommends that these aptitudes are taken into account in the selection process.

056 Laslett, A., Rogers, T. and Temple, T.
'Who owns the books? Developing a book selection policy for an English faculty'
Australian Journal of Reading, 7: 4, 215-222 (1984)
Describes a process for language arts teachers to select instructional materials by formulating a selection policy, applying specific selection criteria, researching information on submitted materials, and using a review committee.

057 Logan, C.
'Criteria for judging bias in literature'
Review Bulletin, 18: 3, 10-13 (1986)
Describes criteria to identify elements of bias, such as stereotypes, archetypes and tokenism, in reading materials.

058 Maccoll, P.
'Selecting resources for geography teaching'
In Fien, J., Gerber, R. and Wilson, P. (eds.), *The Geography Teacher's Guide to the Classroom*
South Melbourne, Vic: Macmillan Australia, 258-277 (1984)
Describes variables affecting the use of instructional materials in geography programs, and presents an instrument for selecting curriculum materials derived from the Curriculum Materials Analysis System devised by the Social Science Education Consortium at Boulder, Colorado.

059 Marsh, C.J.
'Primary school principals: intentions and realities in the selection of curriculum materials'
The Australian Administrator, 4: 3, 1-4 (1983)
Reports a study of the attitudes and roles of a sample of principals in Western Australian primary schools on the dissemination and selection of curriculum materials for social studies and mathematics.

060 Marsh, C.J.
'Selecting and using resources'
In Marsh, C.J. (ed.), *Teaching Social Studies*
Sydney, NSW: Prentice-Hall, 261-285 (1987)
Categorises the various media by citing examples of instructional materials used in social studies education in Australian schools, and presents a checklist for selecting instructional materials derived from Piper's instrument.

061 McVitty, W.

'Children's literature in the classroom'
Primary Education, 14: 3, 5-7 (1983)
Discusses the influence of variables that affect the selection of reading materials for young children.

062 Mitchell, J.
Cultural Bias in Teaching Materials
Sydney, NSW: New South Wales Department of Education (1985)
Presents an inservice module to assist teachers identify bias in instructional materials used in multicultural education programs. Provides three exercises: establishing criteria for judgement; a set of six case studies; and reviewing our materials.

063 Morony, W.
'Textbook checklist'
Australian Mathematics Teacher, 45: 2, 13 (1989)
Presents a checklist for teachers to select mathematics textbooks.

064 New South Wales Department of Education
An Evaluator's Guide to Educational Software and Related Material
Sydney, NSW: New South Wales Department of Education (1985)
Describes and presents an eight-page Software Evaluation Form, comprising a cover sheet and an evaluation checklist available in long and short forms, to be used when evaluating the content, classroom application, program features and support materials of computer courseware. Also presents a plan for conducting an evaluation.

065 New South Wales Department of Education
Handle with Care: A Guide to identifying and eliminating Bias in Software
Sydney, NSW: New South Wales Department of Education (1985)
Presents sets of guidelines for identifying and countering biases in computer software, and discusses the issues relating to bias from Aboriginal Australian, multicultural, non-sexist and special education perspectives.

066 Nimon, M.
'The selection of SF for a school library'
Children's Libraries Newsletter, 12: 3, 88-91 (1976)
Discusses a range of issues relating to the quality and selection of reading materials on science fiction.

067 Palmer, W.S.
'Evolving criteria for evaluating sex education books'
Review, 12: 1, 8-19 (1984)
Presents a checklist of criteria for evaluating instructional materials on sex education, derived from a content analysis of most recommended textbooks.

068 Piper, K.
'A model for evaluating a unit of instructional materials'
In National Committee on Social Science Teaching, *Evaluation in the Social Sciences for Secondary Schools: Teacher's Handbook*
Canberra, ACT: Australian Government Publishing Service, 83-89 (1976)
Presents an instrument comprising four parts, Goals, Format, Processes and Outcomes, for evaluating instructional materials used in social studies programs, and applies the instrument to evaluate an instructional material, *Two Desert Families*.

069 Polack, M.
'Scenario two: the search for the perfect text'
Idiom, 20: 2, 4-5 (1985)
Discusses key issues involved in selecting textbooks for language arts programs.

070 Rasmussen, B.
'Dealing with sexism and ethnocentrism in literature'
English in Australia, 60, 54-57 (1982)
Discusses issues relating to the selection of non-sexist and non-racist reading materials.

071 Salvas, A.D. and Thomas, G.J.
Evaluation of Software
Melbourne, Vic: Victoria Department of Education (1984)
Describes and presents a three-page Software Evaluation Checklist to be used when evaluating the physical characteristics, and the degree to which computer courseware meets both teachers' and students' educational needs.

072 Scarino, A., Vale, D., McKay. P. and Clark, J.
Method, Resources and Assessment
(Australian Language Levels Guidelines Book 3)
Canberra, ACT: Curriculum Development Centre (1988)
Presents criteria for selecting, adapting and developing instructional materials for second language learning according to the Australian Language Levels, guidelines for identifying authentic materials, criteria for selecting materials for groups or individuals, guidelines for adapting textbooks, and criteria for evaluating the content of instructional materials.

073 Schibeci, R.A.
'Educational software: good, bad or indifferent ...?'
Australian Science Teachers Journal, 31: 3, 23-27 (1985)
Reviews published criteria for selecting computer courseware.

074 Shepherd, B.
Science Book Selection
(Science Teaching Project Module 5)
Canberra, ACT: Curriculum Development Centre (1980)
Presents a process for selecting science textbooks by using a sequence of checklists titled buying guide, presentation, reading level, content, accuracy, view of science and safety. Also provides guidance to identify cultural, sexist and political biases.

075 Sherry, M.
'Criteria for evaluating resource materials for use in consumer education'
Narration, 14: 3, 101-103 (1975)
Outlines criteria for evaluating instructional materials for consumer education, presents a set of guidelines for applying the criteria, and identifies sources for appropriate instructional materials.

076 Smith, J.
'Selecting literary texts in the multicultural classroom: some considerations'
Teaching of English, 41, 3-13 (1981)
Describes a range of variables, including the degree of English language acquisition, literary images, cultural relevance and biases, affecting the selection of reading materials for students of non-English speaking backgrounds.

077 Somerville, D.B.
'Criteria for selecting an adequate science text for use in junior secondary classes'
SASTA Journal, 872, 42-44 (1987)
Outlines thr : sets of criteria, those of physical appearance, layout and content, for selecting textbooks on science.

078 South Australia Department of Education
'Selection and access for books and learning materials: guidelines for schools'
Education Gazette, 15: 12 (1987)
(Supplement 87/4)

Discusses the decision-making roles of schools, teachers, students and parents in selecting instructional materials for use in South Australian schools, presents a set of guidelines to implement a decision-making process, and discusses the responsibilities of teachers in mediating in the demands of parents concerning controversial issues in instructional materials.

079 Stannard, P.
Supplementary Materials
(Science Teaching Project Module 7)
Canberra, ACT: Curriculum Development Centre (1981)
Identifies types of items from textbooks such as problems and questions most commonly used, investigations, large photographs, cartoons, simulations, games, and presents a checklist to assist use of these items in science programs.

080 Strube, P.
'The notion of style in physics textbooks'
Journal of Research in Science Teaching, 26: 4, 291-299 (1989)
Presents a set of criteria for assessing stylistic character of physics textbooks in terms of prose structure, word choice and literary characterisation.

081 Watt, M.G.
'Selecting instructional materials: a survey of decision-making processes'
Orana, 27: 2, 108-116 (1991)
Reports a study of decision-making policies and processes used to select instructional materials in the United States. Also relates these practices to current issues of curriculum reform in Australian education.

1.2 Production and Marketing of Instructional Materials

1.2.1 The Publishing Industry

082 Allen, J.
'CEPPS: Curriculum Enrichment Project for Primary Schools'
In Kennedy, K.J. (ed.),*Case Studies in Curriculum Design*
(Australian Case Studies in Curriculum Series)
Bentley, WA: West Australian Social Science Education Consortium, 27-45 (1986); *Journal of Art and Design Education*, 8: 1, 45-63 (1989)
Presents the background to the Curriculum Enrichment Project for Primary Schools as an endeavour by the Western Australia Department of Education to provide resources for gifted children by founding the Centre for Gifted Children at Mt. Lawley College in 1980. The development of curriculum materials in the project is exemplified by description of the process used with the material, *Expressive Arts: Painting, the Art of the Australian Pioneers and Settlers*. Also describes the decision-making process involved in the project.

083 Anderson, R.
'Teachers as curriculum designers'
In Kennedy, K.J. (ed.),*Case Studies in Curriculum Design*
(Australian Case Studies in Curriculum Series)
Bentley, WA: West Australian Social Science Education Consortium, 89-97 (1986)
Describes the processes used in two case studies in which practising teachers participating in a teacher development program developed curriculum materials. In the first, a group applied Tyler's model of curriculum development to revise a curriculum material, *Case Studies from South-East Asia*, originally produced by Qantas by specifying the objectives, content, teaching-learning activities, and the means for student assessment. In the second, a group designed a teacher's guide and curriculum materials for a program on ageing, The Life Journey.

084 Apple, M.W.

'The political economy of text publishing'
Curriculum and Teaching, 1: 1 & 2, 55-67 (1986)
Argues that the profit-seeking nature of the publishing industry leads to a policy of textbook management, thereby resulting in the transmission of standardised cultural knowledge.

085 Barker, L.J. and Taylor, J.C.
A Model for Cooperative Development of Resource Materials and Educational Courseware
Toowoomba, Qld: Darling Downs Institute of Advanced Education (1988); In Roberts, D.W. (ed.), *New Challenges in Distance Education* (Occasional Papers No. 7)
Wagga Wagga, NSW: Riverina-Murray Institute of Higher Education, 3-19 (1989)
Reports a study to design a model for 26 colleges of higher education throughout Australia to cooperate in developing instructional materials for distance education. The study consisted of four stages: establishing participation and gathering data on programs; conducting an analysis and creating a database of information on programs; collecting, documenting and disseminating instructional materials; and generating outcomes for cooperative action.

086 Beasley, B. and McLeod, J.
Guidelines or Writing Trade Teaching Materials
(Teacher Resource 1)
Adelaide, SA: TAFE National Centre for Research and Development (1983)
Describes procedures to be used for developing instructional materials in technical and further education, including variables to be considered, collecting and organising information, matching the readability of text to students' reading levels, establishing the relationship between the learning process and content of materials, organising the layout of text, presenting illustrations, and using learner verification for revising instructional material.

087 Beeson, G.W.
Evaluation of a 'Talking Book' Approach to help Poor Readers use ASEP Materials
Canberra, ACT: Curriculum Development Centre (1979)
Reports a study to verify the effectiveness of poor readers using headphones and cassette players to listen to audiotaped versions of ASEP materials as a supplement to reading the texts. The field-trials in 11 schools indicated that the approach was successful.

088 Birch, A.
'A new perspective on science'
Education News, 18: 10, 28-29 (1984)
Argues that there is no shortage of science textbooks, but their authors often have only a narrow expertise. Also describes the role of the Australian Academy of Science in publishing textbooks.

089 Brown, S. and Nathenson, M.
'Designing instructional materials: guesswork or facts?'
Distance Education, 2: 1, 7-22 (1981)
Reports a study of mathematical skills and learning capabilities of new students in Open University courses in Britain as part of a strategy for ensuring that the design of instructional materials used in the courses matches their skills and capabilities.

090 Butler, J. and Milliken, M.
'Writing geography textbooks'
Geographical Education, 5: 1, 3-4 (1985)
Describes the procedures used by two teacher-authors of popular geography textbooks, what they have attempted to accomplish and difficulties they encountered.

091 Chong, S.W.

A Practical Approach to Self Formative Evaluation of External Study Instructional Material
Perth, WA: TAFE External Studies College (1988)
Describes an approach for integrating learner verification and revision of instructional materials within the developmental process. The approach consists of two stages: in the first, the students respond to a questionnaire whilst using an instructional material; and in the second, selected students make specific but spontaneous comments about instructional materials they are using in their program.

092 Clarke, J.A.
'A model for pre-trial formative curriculum evaluation: its development and application'
Australian Journal of Education, 19: 3, 251-267 (1975)
Reports the findings of a content analysis of the curriculum material, *Pushes and Pulls*, produced by the Australian Science Education Project (ASEP) by using the Thematic and Structural Analysis Technique, and the revision of the material based upon the results. Also compares the results of a field-test of the original and revised versions of the material, showing the revised version improved student achievement.

093 Clyne, I.D.
'A curriculum developer's diary: to produce an instant multicultural kit was impossible ...'
In Kennedy, K.J. (ed.),*Case Studies in Curriculum Design*
(Australian Case Studies in Curriculum Series)
Bentley, WA: West Australian Social Science Education Consortium, 65-88 (1986)
Presents an account in the form of a diary of the process used during 1976 to develop curriculum materials for the Multicultural Education Materials Project initiated by the South Australia Department of Education.

094 Colbourne, R.F. and Brockley, B.P.
'Teacher attitudes to primary school science and structured science curriculum material'
New Education, 3: 2, 95-101 (1981)
Describes the development of a composite teacher's guide and curriculum material, the *BCAE Weekly Science Program and Resource Units*, by the Science Education Department of the Bendigo College of Advanced Education, intended to overcome limitations in the existing curriculum. Also reports the results of a survey of 500 teachers on their perceptions of the effectiveness of the material.

095 Cook, T., Grant, C., Re, T. and Worland, J.
'Why not develop your own environmental readers?'
Reading Education, 6: 1, 66-71 (1981)
Presents a rationale and set of guidelines for developing reading materials that take account of the cultural situation of Australian Aboriginal children. Also recommends the types of resources, the use of situational analysis and types of appropriate materials to develop.

096 Coppell, B.
'The Murawina Readers: a first report on the development of community related curriculum materials'
Reading Education, 3: 2, 27-30 (1978)
Describes the development of the Murawina Readers, a series of basal reading materials designed for Australian Aboriginal children living in Sydney, and explains how they have met some of the special needs of immigrant and Australian Aboriginal children.

097 Coppell, W.G.
'The Murawina Readers: a first stage in the development of community related curriculum materials in an Aboriginal context'
Aboriginal Child at School, 7: 1, 47-51 (1979)
Describes the rationale for developing the Murawina Readers, a series of basal reading materials designed for Australian Aboriginal children in Sydney, and reports surveys of

teachers' and students' perceptions indicating that the materials had achieved most objectives.

098 Dircks, R.
'The contribution of the Australian Academy of Science to science education in Australia'
Australian Science Teachers Journal, 34: 2, 84-88 (1988)
Describes the involvement of the Australian Academy of Science in developing curriculum materials based upon the Biological Sciences Curriculum Study, and sponsoring the development of curriculum materials through the School Chemistry Project, School Geology Project and School Physics Project.

099 Fraser, B.J.
'Combining quantitative and qualitative methods: evaluation of High School Education Law Project (HELP)'
In Fraser, B.J., *Case Studies in Curriculum Evaluation*
(Australian Case Studies in Curriculum Series)
Bentley, WA: West Australian Social Science Education Consortium, 1-38 (1985)
Describes the techniques used to evaluate dissemination processes, involving inservice training of change agents and teachers and field-testing of instructional materials developed by HELP in New South Wales during 1978. Reports the results of the field-testing using three procedures: an analysis of cognitive achievement data from students using the materials; analysis of data on students' attitudes towards using the materials; and visits to field-testing sites.

100 Fraser, B.J.
'Internal formative evaluation of Australian Science Education Project'
In Fraser, B.J., *Case Studies in Curriculum Evaluation*
(Australian Case Studies in Curriculum Series)
Bentley, WA: West Australian Social Science Education Consortium, 67-86 (1985)
Describes the range of widely applicable techniques used in formative evaluation of ASEP. Includes an analysis of eight techniques used to verify ASEP materials by surveying the attitudes of science experts, teachers and students, and measuring student achievement.

101 Gilbert, P.
'Student text as pedagogical text'
In De Castell, S., Luke, A. and Luke, C. (eds.)
Language, Authority and Criticism: Readings of the School Textbook
Lewes, East Sussex: The Falmer Press, 195-202 (1989)
Discusses the development of children's authorship of reading materials, ensuing from the 'process writing' movement, and its acceptance as part of the published textual materials used in the classroom.

102 Gough, N.
Exploring Childhood: An Evaluation of the Materials
Canberra, ACT: Curriculum Development Centre (1981)
Reports a study of decision-making processes involved in the Evaluation of Exploring Childhood Project commissioned by the Curriculum Development Centre between 1979 and 1981, in which the *Exploring Childhood* materials developed by the Education Development Center at Boston, Massachusetts, were adapted for use in Australian schools and trial-tested in six schools.

103 Gough, N.
'Curriculum development and teacher development in a materials evaluation project'
Curriculum Perspectives, 3: 1, 37-42 (1983)
Examines the way in which innovative curriculum materials appear to assist both as a medium for curriculum development and for professional development of teachers.

104 Hedberg, J.G.
'Desktop publishing and better design in educational materials'
Education Research and Perspectives, 14: 1, 69-81 (1987)
Discusses the scope for improving the designs of instructional materials through the application of desktop publishing facilities available on microcomputers.

105 Howe, J.
'An education centre in Victoria'
In Walton, J. and Morgan, R. (eds.), *Some Perspectives on School Based Curriculum Development*
Armidale, NSW: University of New England Publishing Unit, 113-128 (1978)
Describes the establishment of the West Gippsland and Latrobe Valley Community Education Centre at Warragul, Victoria, and its mission to assist school-based curriculum development. Accomplishment of this mission is exemplified through citing three projects, including the development and dissemination during 1975-1976 of a curriculum material, *Settlement in Gippsland*.

106 Hudson, W.
'Of piper-playing and tune-calling: Dartmouth and the educational publisher'
Pivot, 7: 3, 16-19 (1980)
Discusses how educational changes have influenced the publishing industry, and predicts probable consequences for the future.

107 Hughes, P. and Kennedy, K.J.
'Evaluating the impact of the Curriculum Centre in Australia'
Studies in Educational Evaluation, 13: 3, 297-305 (1987)
Describes the activities of the Curriculum Development Centre, and analyses its evaluation activities in program monitoring and project evaluation, citing reported research on its effectiveness in disseminating and implementing curriculum materials in schools.

108 Johnstone, A.H. and Reid, N.
'Interactive teaching materials in science'
SASTA Journal, 812, 4-15 (1981)
Describes the rationale underlying the development of curriculum materials on chemistry used in Scotland, the content of the materials, the use of a questionnaire to provide learner verification on the use of the materials.

109 Kember, D. and Kemp, H.
'Computer-aided publishing and open learning materials'
British Journal of Educational Technology, 20: 1, 11-26 (1989)
Discusses the potential impact of computer-aided publishing hardware and software on the production of instructional materials for distance education. Also compares and assesses the available computer-aided publishing systems in relation to the production of instructional materials.

110 Kennedy, K.J.
'Lessons from a curriculum development project'
Curriculum Perspectives, 4: 1, 53-59 (1984)
Analyses the decision-making processes of a project in which curriculum materials for the Arthritis Education Program were developed. Identifies a sequence of four steps: pre-notional, concerned with socialisation of the development team; notional, concerned with design decisions; production, concerned with practical issues of materials design; and post-production, concerned with the final product and its potential use in schools.

111 Kennedy, K.J. and McDonald, G.
'Designing curriculum materials for multicultural education: lessons from an Australian development project'

Curriculum Inquiry, 16: 3, 311-326 (1986)
Describes decision-making processes involved in designing a curriculum material, *An Indian Ocean People*, on the family life styles of ethnic groups whose country of origin was in the Indian Ocean region but who had settled in Western Australia.

112 Kenworthy, B. and Schilling, R.
The National Development of Instructional Materials
(Centre Report 5)
Adelaide, SA: TAFE National Centre for Research and Development (1984)
Reports a study into the feasibility of agencies for technical and further education producing instructional materials through national cooperation. Describes the background and planning for the project, reviews existing means whereby instructional materials are developed, projects alternative models for developing instructional materials, and then selects and describes a preferred model titled a TAFE National Educational Technology Service. Also presents a set of guidelines for planning, structuring and implementing this service.

113 Kenworthy, B. and Schilling, R.
Structures and Operations of TAFE Instructional Materials Production Centres in Australia
Adelaide, SA: TAFE National Centre for Research and Development (1984)
Reports the results of a survey of technical and further education colleges in each Australian state and territory on the scope of their activities in producing instructional materials.

114 Levin, M.
'Feminism and textbooks'
ACES Review, 10: 3, 12-15 (1983)
Discusses the effects that guidelines for sex fairness, imposed upon the commercial textbook industry, have had on the quality of instructional materials.

115 Lowe, I. and Stephens, M.
'Mathematics at Work - expanded'
Australian Mathematics Teacher, 43: 2, 11-18 (1987)
Describes the processes used by the Australian Academy of Science to revise and expand its textbook series, *Mathematics at Work*. Also outlines the content as emphasising mathematical modelling with appropriate use of technology, group investigations, and communication.

116 Lowe, P.K.
'Producing science curriculum materials: some reflections concerning readability and the development of understanding'
Australian Science Teachers Journal, 35: 1 , 18-26 (1989)
Describes approaches used to revise curriculum materials in a major science curriculum project, and suggests alternative strategies by which the instructional potential of examples and illustrations can be exploited more fully in the design of curriculum materials.

117 Madin, J.
'Investigating the National Estate: a developer's perspective'
Ethos, 11: 1, 2-11 (1981)
Describes the development and design of the instructional material, *Investigating the National Estate*, produced by the Curriculum Development Centre and the Australian Heritage Commission.

118 Marland, P.W. and Store, R.E.
'Some instructional strategies for improved learning from distance teaching materials'
Distance Education, 3: 1, 72-106 (1982)

Examines the use of advance organisers, overviews, pretests, objectives, inserted questions and devices in typography and graphics to facilitate learning at a distance, and presents guidelines for their use.

119 Marsh, C.J.
'Professional development through materials production and implementation'
In Hughes, P., Deer, C.E. and Neal, W.D. (eds.), *Better Teachers for Better Schools*
Carlton, Vic: The Australian College of Education, 175-185 (1987)
Discusses how teachers' professional development is served by them developing and implementing curriculum materials within the school setting. Also comments upon how the structures of commercially produced materials affects the capabilities of teachers to implement them successfully.

120 McLeod, J.
'Writing teaching materials for TAFE students'
Australian Journal of TAFE Research and Development, 1: 2, 127-130 (1986)
Discusses a concern that many writers of curriculum materials at the higher education level do not consider the user's perspective, and suggests how materials could be improved by taking this into account.

121 McQueen, H.
'Publications'
In Committee to Review Australian Studies in Tertiary Education, *Papers on Science and Australian Studies* (CRASTE Paper No. 9)
Canberra, ACT: Committee to Review Australian Studies in Tertiary Education, 93-109 (1986)
Discusses factors responsible for publishers failing to produce instructional materials for science education at higher education level that are based upon Australian content.

122 Mitchell, J.T. and Traill, R.D.
'Making curriculum implementation a reality'
Curriculum Perspectives, 6: 1, 23-27 (1986)
Describes the development of a curriculum material, *Electing Australia's Federal Parliament*, by the Australian Electoral Commission and the Curriculum Development Centre. Reports the findings of a study to evaluate the material both by content analysis using the Sussex Scheme and the effectiveness of its implementation by surveying its use in high schools, and using curriculum consultants to revise the material. Also presents a model for developing and implementing curriculum materials.

123 Morgan, R.
'The maladministration of innovation'
The Journal of Educational Administration, 16: 2, 187-199 (1978)
Argues that criticisms of the centre periphery model for developing curriculum materials fail to distinguish between two stages: production; and distribution. Analyses this weakness to be caused by the isolation of support agencies from one another, and suggests that a more articulated pattern for development of curriculum materials would be possible in Britain and Australia.

124 Naidu, S.
'Faculty involvement in instructional materials development for distance study at the University of the South Pacific'
Distance Education, 8: 2, 176-189 (1987)
Reports a study of involvement by members of the University's teaching staff in developing instructional materials for distance education in terms of time spent, levels of satisfaction with the products, and how the process could be improved.

125 Oliver, J.
'Curriculum development at the tertiary level: a study of the deliberative process'

In Kennedy, K.J. (ed.),*Case Studies in Curriculum Design*
(Australian Case Studies in Curriculum Series)
Bentley, WA: West Australian Social Science Education Consortium, 1-26 (1986)
Describes a process used to develop curriculum materials for music education in an institution of higher education as a plan comprising four stages: considering the possibilities; making decisions and choices; developing the materials; and revision of the materials through learner verification.

126 Parer, M.S.
Textual Design and Student Learning
Churchill, Vic: Gippsland Institute of Advanced Education (1988)
Reports a study into the effects upon student learning of four aspects of textual design within instructional materials. The findings indicated that instructional design and linguistic factors were more important than typographical aspects in facilitating student learning.

127 Paul, C. and Paul, P.
'The case for specially created materials for learners of English as a second language'
Australian Journal of Adult Education, 25: 3, 4-8 (1985)
Identifies that there is a shortage of suitable instructional materials for learners of English as a second language in library collections, and argues that materials should be developed that address their requirements for communicative competence.

128 Print, M.
'Curriculum materials for able children'
Gifted Education International, 1: 2, 103-106 (1983)
Describes a project, initiated at Mt. Lawley College in Western Australia, to develop curriculum extension project packs for primary grade students who demonstrate outstanding ability.

129 Queensland Department of Education
Educational Software Development: A Guide to the Design and Development of Computer-based Learning Materials
Brisbane, Qld: Queensland Department of Education (1982)
Describes a process for developing courseware based upon four steps: applying criteria for educational design identified through a school-based needs analysis; designing a flow chart of the program; identifying programming considerations for developing courseware; and specifying the components of a published courseware program.

130 Robottom, I.
'Investigating the National Estate: some early reactions'
Ethos, 11: 1, 12-17 (1981)
Describes the design of *Investigating the National Estate*, and reports the results of trial-tests.

131 Soliman, I.K. and Holden, N.F.
'Video production for distance education: a collaborative enterprise'
Distance Education, 9: 2, 298-311 (1988)
Describes the processes used in the steps of planning, preproduction, shooting, and editing when producing videotapes for distance education programs from the perspectives of an academic video producer and a media specialist. Also identifies the prerequisites for such collaboration and ways institutions of higher education may support small-budget video productions.

132 Steele, J.
'The Supertext Superdisc Project'
Australian Journal of Educational Technology, 3: 1, 45-56 (1987)
Describes the processes used by the Australian Caption Centre to develop Australia's

first videodisc, *Ask the Workers...*, on career education and its subsequent field-testing in ten schools in Western Australia.

133 Stowell, R. and Bentley, L.
'Introducing "New Wave Geography"'
Geographical Education, 5: 4, 44-45 (1988)
Describes the preparation of a two-book series of geography textbooks by the Geography Teachers Association of Victoria.

134 Sullivan, J.
'Environmental education: developing locally based readers'
The Primary Journal, 1, 26-31 (1982)
Describes the process used by a group of teachers at a rural primary school in New South Wales to develop a reader on environmental education.

135 Treagust, D.F., O'Loughlin, M.J. and Dekkers, J.
'An approach to curriculum dissemination through an education centre'
Curriculum Perspectives, 5: 2, 49-52 (1985)
Describes a plan for using education centres as focal points for diffusing curriculum materials, and presents a case study of its implementation at the Fremantle Education Centre in Western Australia. Also describes the plan as including five stages: initiation of dissemination; establishing external structure; small-scale implementation; workshops; and school-based developments.

136 Treece, U.
'The role of Australian curriculum libraries in education today'
Australasian College Libraries, 4: 1, 3-7 (1986)
Reports the findings of survey of 31 curriculum service centres, holding collections of instructional materials, within the education faculties of Australian institutions of higher education on their organisation, administration, collections and equipment.

137 Watson, V.
'Modifying written materials for secondary students'
Australian Journal of Remedial Education, 16: 1, 15-16 (1984)
Argues that teachers should revise student exercises contained within instructional materials to suit students' abilities, and presents guidelines to accomplish revisions.

138 Welch. I.
'The Qantas family: forgotten friends?'
In Kennedy, K.J. (ed.),*Case Studies in Curriculum Design*
(Australian Case Studies in Curriculum Series)
Bentley, WA: West Australian Social Science Education Consortium, 47-63 (1986)
Presents an account of the involvement of Qantas with the Asian Studies Coordinating Committee in developing curriculum materials commencing in 1971 with *Three Indonesian Families*, and followed by *Malaysia Families in Change, Communities in Thailand, Family Japan, Philippine Families, Iran Journey* and *Themes from India*, followed by collaboration with the Curriculum Development Centre to produce *Seventeen Australian Families* in 1980. Also evaluates the processes used in disseminating and implementing the materials in schools.

139 Wright, C. and Conroy, C.
'Preparing CBI print-based support material: an information/instructional design perspective'
Distance Education, 9: 1, 84-94 (1988)
Describes the elements of instructional design applied to develop supplementary materials used to support a computer-managed learning system at Grant MacEwen Community College at Edmonton in Alberta, Canada.

140 Christie, F.
'The Language Development Project'
English in Australia, 58, 3-9 (1981)
Describes the background and planning for the Language Development Project (LDP), its use of a model of language development based upon Halliday's work, and the activities of state teams.

141 Christie, F.
'National curriculum co-ordination: some lessons from the CDC's Language Development Project'
Australian Journal of Education, 29: 2, 150-160 (1985)
Describes the activities of the Language Development Project (LDP) as encompassing three stages: the first involving research by collecting data from various groups to identify an optimal language arts curriculum; the second involving development of teaching-learning activities, curriculum materials and teachers' guides; and the third involving dissemination of the materials.

142 Cohen, D.
'Curriculum history: Australia'
In Husen, T. and Postlethwaite, T.N. (eds.), *The International Encyclopedia of Education* Oxford, Eng: Pergamon Press, 2: 1191-1193 (1985)
Describes the main initiatives in curriculum development in Australian education since Federation in 1901. Includes accounts of significant projects and developments relating to curriculum materials.

143 Cohen, D. and Fraser, B.J.
The Processes of Curriculum Development and Evaluation: a Retrospective Account of the Processes of the Australian Science Education Project
Canberra, ACT: Curriculum Development Centre (1987)
Provides a retrospective account of the processes of curriculum development and evaluation employed in the Australian Science Education Project (ASEP), with the intention that the study will identify appropriate practices for future curriculum initiatives. Also describes those processes used to produce curriculum materials, and evaluates the effectiveness of ASEP materials.

144 Dynan, M.B. and Ryan, A.S.
Final Physical Science Evaluation Report
(Co-operative Research Series Report No. 8)
East Perth, WA: Western Australia Department of Education (1981)
Reports a study to evaluate a program for physics education adopted in Western Australian schools during 1979. Describes the processes occurring in developing and disseminating curriculum materials associated with the program. Also reports on the perceptions of science specialists, teachers and students on the effectiveness of the instructional materials and curriculum guides following their field-trial in schools.

145 Edwards, J.
'Materials development: important factors not always considered'
Australian Science Teachers Journal, 22: 3, 41-50 (1976)
Discusses experiences and suggests approaches to produce curriculum materials for the Australian Science Education Project (ASEP), and their application to in-service training of curriculum developers.

146 Eliot, M.
'The Social Education Materials Project (SEMP): some negative aspects'
Curriculum Perspectives, 1: 1, 55-63 (1980)
Reports the findings of two case studies of students' and teachers' perceptions of their use

of instructional materials produced by the Social Education Materials Project (SEMP).

147 Fisher, D.L. and Fraser, B.J.
'A replication of the effects of using ASEP materials on students' attitudes'
Australian Science Teachers Journal, 26: 2, 80-82 (1980)
Compares the findings of three studies, one conducted in Victorian schools and the others in Tasmanian schools with samples of seventh graders, to identify whether curriculum materials produced by the Australian Science Education Project (ASEP) were more effective in increasing student achievement than other materials. The results of each study indicated that the ASEP materials were more effective.

148 Flynn, T.
'The Science Teaching Project'
Australian Science Teachers Journal, 24: 2, 73-78 (1978)
Describes the background to the Science Teaching Project, its relationship to the Australian Science Education Project (ASEP), and its function in designing teachers guides.

149 Flynn, T.
Introducing the Science Teaching Project
Canberra, ACT: Curriculum Development Centre (1980)
Describes the Science Teaching Project which developed and field-trialled 23 modules for inservice education of science teachers between 1977 and 1979. Presents the background, purpose, the use and descriptions of the modules, which included Module 5, *Science Book Selection* and Module 7, *Supplementary Materials*.

150 Fraser, B.J.
Review of Research in Australian Science Education Project
(CDC Professional Series)
Canberra, ACT: Curriculum Development Centre (1978)
Reports a study of the Australian Science Education Project (ASEP) covering five aspects: an investigation of its rationale; a content analysis of ASEP materials; research approaches into the relationship between ASEP materials and the learning environment; research into student learning from using ASEP materials; and research on processes involved in disseminating ASEP materials.

151 Fraser, B.J.
'External summative evaluation of Australian Science Education Project'
In Fraser, B.J.,*Case Studies in Curriculum Evaluation*
(Australian Case Studies in Curriculum Series)
Bentley, WA: West Australian Social Science Education Consortium, 39-66 (1985)
Reviews research on evaluative studies into five aspects of the Australian Science Education Project (ASEP): its purpose; the content analysis of ASEP materials; the learning environment in which ASEP materials are used; learning outcomes; and the processes for disseminating ASEP materials.

152 Fraser, B.J. and Northfield, J.R.
A Study of some Aspects of ASEP during its First Year of Availability
(CDC Professional Series)
Canberra, ACT: Curriculum Development Centre (1981)
Reports a study of ASEP materials involving three samples: science teachers were surveyed on how ASEP materials had affected their teaching practice; students were administered an experimental design to measure the effectiveness of ASEP materials upon their learning; and students were administered an attitudinal scale to measure their perceptions of the extent to which an ASEP material affected the learning environment.

153 Keeves, J.P. (ed.)
'New perspectives in teaching and learning'
In Keeves, J.P. (ed.), *Australian Education: Review of Recent Research*

Sydney: Allen and Unwin, 147-178 (1987)
Reviews research on the organisational context of teaching and learning, innovative projects in curriculum and classroom practices, the psychological basis of teaching and learning, classroom research and teaching skills, and developments in educational technology in Australian education. Includes an account of the development of curriculum materials by ACER and CDC, and an analysis of the learning and developmental theories implicated within the ASEP materials.

154 Madin, J.
'SEMP: implications for school based curriculum development'
In Walton, J. and Morgan, R. (eds.), *Some Perspectives on School Based Curriculum Development*
Armidale, NSW: University of New England Publishing Unit, 145-168 (1978)
Describes how the Social Education Materials Project (SEMP) became dominated during the developmental stage by the production of curriculum materials, in spite of this activity being defined as less important than teacher involvement. Explains that this occurred in part through the involvement of teachers with the project teams in developing materials and in field-tests of materials of the program, Family, in twenty-five New South Wales schools. Also presents an account of the censorship of SEMP materials in Queensland during 1978.

155 Madin, J.
'The Social Education Materials Project (SEMP): some positive aspects'
Curriculum Perspectives, 1: 1, 45-53 (1980)
Describes the aims and processes used by one state team in the Social Education Materials Project (SEMP) for developing instructional materials of the program, Family, and for implementing the materials in Australian schools.

156 Marsh, C.J.
'Teachers' use of the Social Education Materials Project (SEMP)'
Australian Journal of Education, 27: 3, 249-259 (1983)
Describes the dissemination and use of curriculum materials produced in the Social Education Materials Project (SEMP) during 1975 and 1976, and provides four case studies of their use by individual teachers.

157 Marsh, C.J. and Carter, D.
'An analysis of formative diffusion strategies used by project teams associated with the Social Education Materials Project (SEMP)'
Australian Journal of Education, 24: 3, 302-314 (1980)
Describes the strategies used by project teams, operating in each state during 1975 and 1976, to diffuse curriculum materials produced by the Social Education Materials Project (SEMP). Also assesses the influence of the strategies upon teachers who have adopted SEMP materials by comparing uses made of particular strategies with those proposed in diffusion models.

158 Musgrave, P.W.
'Curricular research and development'
In Keeves, J.P. (ed.), *Australian Education: Review of Recent Research*
Sydney: Allen and Unwin, 90-114 (1987)
Defines the prevailing interpretations in Australian education of curriculum theory and decision-making, and reviews research on the content and pedagogy in the curriculum, approaches for evaluation, and processes for development and dissemination. Includes accounts of the Australian Science Education Project (ASEP) and Social Education Materials Project (SEMP), reviewing research on their roles and outcomes as large-scale projects for developing, diffusing and adopting curriculum materials.

159 Northfield, J.
'Curriculum dissemination: learning from experience'

Curriculum Perspectives, 3: 2, 56-60 (1983)
Describes activities in the Australian Science Education Project (ASEP) and Social Education Materials Project (SEMP) in producing and disseminating curriculum materials, and analyses the effectiveness of the dissemination strategies.

160 Owen, J.
'Three years on: the impact of ASEP materials in Australian schools'
Australian Science Teachers Journal, 22: 3, 15-24 (1976)
Reports a survey of a sample of teachers in all Australian states and territories, except the Northern Territory, on their use of curriculum materials developed by the Australian Science Education Project (ASEP), as well as other instructional materials for science programs. The findings indicated that the extent of use of ASEP materials depended upon the use of other materials.

161 Owen, J.
'The diffusion and utilisation of the Australian Science Education Project materials'
SASTA Journal, 763, 48-50 (1976)
Discusses curriculum planning in science and reviews the use of materials produced during the Australian Science Education Project (ASEP).

162 Owen, J.
The Impact of the Australian Science Education Project on Schools
(CDC Professional Series)
Canberra, Act: Curriculum Development Centre (1978)
Describes the history of the Australian Science Education Project (ASEP) and presents a framework for studying the diffusion and use of ASEP materials in Australian schools. Reports from this study that the patterns of dissemination and use of ASEP materials varied from state to state.

163 Piper, K.
English Language in Australian Schools: Towards a Practical Framework
(Australian Education Review No. 27)
Melbourne, Vic: Australian Council for Educational Research (1988)
Reports the findings of three major projects in language arts education and discusses their implications for the development of a practical framework for language arts education at the junior secondary level. Also includes accounts of the development of curriculum materials in the Language Development Project (LDP), the first of the three projects.

164 Robottom, I.M.
The Environmental Education Project Evaluation Report
Canberra, ACT: Curriculum Development Centre (1983)
Reports a study to evaluate the Environmental Education Project, initiated by the Curriculum Development Centre in 1980, covering aspects of the background to the project, the evaluation and dissemination of curriculum materials, and an assessment of the value of the project as an effort in reform and innovation. Examines the content of the curriculum materials produced in the project in terms of how they reflect the CDC's rationale on environmental education, the processes of their dissemination, and the findings of a survey of teachers on their use of the materials.

165 Spring, G.
'CDC activities in support of school based curriculum development'
In Walton, J. and Morgan, R. (eds.), *Some Perspectives on School Based Curriculum Development*
Armidale, NSW: University of New England Publishing Unit, 51-83 (1978)
Describes both national and state-level policy-making in curriculum reform in Australian education leading to the establishment of the Curriculum Development Centre (CDC), its policy and role in school-based curriculum development, and the activities of the CDC Study Group on Support Systems in fostering school-based curriculum development. Also

presents a proposed plan for developing professional materials for teacher development through school-based curriculum development.

2 EVALUATION AND CRITICISM OF INSTRUCTIONAL MATERIALS

2.1 General Discussion and Special Topics

2.1.1 General References

166 Broadbent, M.
'Networking, school libraries and curriculum information: current issues and concerns'
Australian Library Journal, 32: 2, 3-10 (1983)
Examines activities relating to the development of the Australian Bibliographic Network, the national schools cataloguing service and the Australian Education Council Curriculum Materials Committee.

167 Broadbent, M. and Kemp, B.
'Meeting curriculum information needs'
Curriculum Perspectives, 3: 2, 3-7 (1983)
Discusses the needs of teachers for curriculum information, and describes the development of curriculum information services by the Curriculum Development Centre, the Australian Council for Educational Research and the activities of the Curriculum Materials Committee established by the Australian Education Council in 1981.

168 Davis, E.
'Evaluating elements of curriculum'
In Davis, E., *Teachers as Curriculum Evaluators* (Classroom and Curriculum in Australia)
Sydney, NSW: George Allen and Unwin, 64-98 (1980)
Examines several approaches and techniques to evaluate the curriculum. Includes a review of the main issues relating to the evaluation of curriculum materials in Australian education.

169 Garner, N. and Biewer, M.
Talking about Textbooks
Melbourne, Vic: Victoria Department of Education (1983)
Reviews research on linguistic aspects of textbooks, particularly on the varying structures, readability, vocabulary and syntax that affect learners of English as a second language in schools. Reports two studies: in the first, students of non-English speaking backgrounds rewrote a section of a textbook; and in the second, another group of students identified difficult language elements in a textbook claimed to have been written for students with learning difficulties. Also suggests strategies for teachers to use in selecting and adapting textbooks for second language learners.

170 Jeffery, P.
'Some progress and problems in materials evaluation'
Modern Teaching, 36, 16-21 (1976)
Discusses the role of the Australian Council for Educational Research in developing processes and products, based upon those used by the Educational Products Information Exchange Institute in New York, to evaluate curriculum materials, and describes the design of an instrument, the Review Guide.

171 Jeffery, P.
'Research confirms school librarian's important role in dissemination to teachers'
Journal of the School Library Association of Queensland, 16: 2, 5-6 (1984)
Reports the results of a survey of a sample of teachers on their use of particular sources of information about curriculum materials. The findings indicated that teachers prefer to use and value informal sources involving personal contacts.

172 Marsh, C.J.
'Curriculum materials analysis in social studies methods classes'
The Social Studies, 74: 3, 107-111 (1983)
Reports the findings of a survey of social studies professors in Australian colleges and universities that showed curriculum materials analysis is not a major emphasis in elementary methods courses.

173 Marsh, C. and Stafford, K.
'Evaluating plans and practices'
In Marsh, C. and Stafford, K., *Curriculum Practices and Issues*
Sydney, NSW: McGraw-Hill Book Co., 58-98 (1984)
Examines several approaches and techniques to evaluate the curriculum. Includes a review of the main issues relating to the evaluation of curriculum materials in Australian education.

174 Reynolds, A., Haymore, J., Ringstaff, C. and Grossman, P.
'Teachers and curricular materials: who is driving whom?'
Curriculum Perspectives, 8: 1, 22-29 (1988)
Reports a study of variables affecting beginning teachers' evaluations of curriculum materials and their decisions to modify materials for use in the classroom.

175 Singh, M.G.
'Towards a strategic redefinition of intercultural studies'
Discourse, 7: 2, 69-85 (1987)
Discusses the issue of adopting more appropriate practices for developing, selecting and evaluating curriculum materials used in multicultural education within the Multicultural Education Program. Also recommends participation of ethnic community members in the processes, and describes procedures for defusing the issue.

176 South Australia, Department of Technical and Further Education
Instructional Materials for the TAFE Aboriginal Education Programme, South Australia
Adelaide, SA: South Australia, Department of Technical and Further Education (1986)
Reports a study intended to establish a clearinghouse for information on instructional materials used in technical and further education programs for Australian Aborigines in South Australia, in which teachers at the School of Aboriginal Education (TAFE) were surveyed on their awareness and use of instructional materials, a Resource Guide was developed to disseminate information on instructional materials, criteria for evaluating instructional materials were identified, a resource network was established to collect, analyse and disseminate information, and the application of a computer-based information system is projected.

177 Stannus, M.J.
'NCIN'
Secondary Library Newsletter, 19: 30, 16-17 (1986)
Describes the New South Wales Curriculum Information Network (NCIN) developed to provide a better exchange of evaluative information on curriculum research and curriculum materials within the New South Wales Department of Education.

178 Strube, P
'Genre theory and textbook criticism: non-fiction as literature'
English in Australia, 75, 28-32 (1986)
Argues that it is appropriate to apply literary criticism to non-fictional materials, such as textbooks, through the application of genre theory.

179 Taylor, C.V.
The English of High School Textbooks
(Education Research and Development Committee Report No. 8)
Canberra, ACT: Australian Government Publishing Service (1979)

Reports a study in which the content of eighteen textbooks most used in New South Wales and Australian Capital Territory schools were analysed to identify linguistic difficulties that impede comprehension by students of non-English speaking backgrounds.

180 Watt, M.G.
'The exchange of information on instructional materials: an evaluation of planned change in Australian education'
Australian Journal of Educational Technology, 5: 2, 77-88 (1989)
Describes a plan for a program to establish a clearinghouse for exchanging information on instructional materials used in Australian schools.

181 Western Australian Educational Computing Consortium
National Software Clearinghouse Feasibility Study: Report to Commonwealth Curriculum Development Centre
Bentley, WA: Western Australian Educational Computing Consortium (1986)
Reports a study presenting a rationale for the Curriculum Development Centre to establish a National Software Clearinghouse intended to exchange information on the development and evaluation of computer courseware with the Australian educational community. Includes the results of a survey of the activities of related agencies in Australia, Canada, United States and United Kingdom, and proposes a preferred plan for the clearinghouse using available resources.

182 Williams, M.C. and Lowther, R.G.
'Courses, kits, aids and games evaluated: assistance for teachers in selecting educational material'
Education (WA), 25: 1, 25-26 (1976)
Describes the process occurring in a project, initiated by the Curriculum Branch of the Western Australian Department of Education, to evaluate instructional materials in a variety of media and to communicate the evaluations to teachers.

2.1.2 Readability

183 Anderson, J.
'Lix and Rix: variations on a little-known readability index'
Journal of Reading, 26: 6, 490-496 (1983)
Describes the development and adaptation of the Lasbarhetsindex (Lix), a readability formula developed in Sweden, reports validity data, and describes the development by the author of a variant, the Rix readability formula.

184 Anderson, J. and Coates, J.
'The teacher's dilemma: how to gauge the suitability of reading materials'
Australian Journal of Reading, 2: 3, 135-142 (1979)
Discusses a variety of procedures for matching readers and reading materials, and examines the construction, scoring and interpretation of cloze procedure.

185 Beiers, R.J. and Anderson, J.
'Declining levels of literacy or increased reading demands on students?'
South Australian Journal of Educational Research, 1: 1, 76-82 (1978)
Reports a study of the readability of geology and chemistry textbooks adopted in South Australia for the upper secondary level between 1929 and 1978. The findings indicated that recent publications were more difficult to read.

186 Bouffler, C.
'Predictability: a redefinition of readability'
Australian Journal of Reading, 7: 3, 125-134 (1984)
Discusses research findings calling into question the notion of readability and the application of readability formulas to basal reading materials.

187 Edwards, P.J.
'You've bought it but can they read it? or conversely, you're thinking of buying it but will they be able to read it?'
The Primary Journal, 4, 32-35 (1979)
Discusses the role of readability in selecting instructional materials, and examines the procedures for scoring four readability formulas: Fry; SMOG; FOG; and cloze.

188 Elkins, J. and Davies, G.
'Logical connectives and readability of textbooks'
Reading Education, 3: 2, 15-23 (1978)
Discusses the concept of logical connectives, which refer to coordinating, qualifying or adverbial conjunctions used to link a simple proposition with another idea to form a complex proposition, and investigates their use in cloze passages. Findings indicated that students found considerable difficulty with replacement of logical connectives, suggesting that relating concepts is a specific source of difficulty in reading secondary school texts.

189 Green, M. and Morris, B.
'Practical application of cloze tests to assess readability'
Reading Education, 2: 2, 11-13 (1977)
Reports a study into the selection of representative cloze passages from a textbook, in which twelve passages were selected from a single text to demonstrate the wide range of difficulty. The results indicated that merely sampling the book by choosing three passages is an unsatisfactory method of identifying a representative passage.

190 Henderson, J.
'Two-level readers - an investigation'
Australian Journal of Reading, 2: 3, 152-157 (1979)
Reports a study of the readability and human interest by using the Flesch formula on two, two-level series of basal readers, one level designed for average readers and the other for readers experiencing difficulties. The findings indicated minimal differences between the two levels for both series.

191 MacDonald, T.H.
'How can I study science when I can't read the book?'
Australian Journal of Reading, 3: 3, 137-142 (1980)
Reports a study of the perceptions of teachers at Newcastle schools in New South Wales on students' difficulties in reading science textbooks which were measured by the Fry and SMOG readability formulas. The findings indicated that there was a mismatch between readers and their textbooks.

192 MacPherson, R.J.S. and Kammann, V.
'Textbook readability'
Education (WA), 29: 1, 30-31 (1980)
Reports a study in which the reading ages of a sample of eighth graders at Manjimup Senior High School in Western Australia were measured by the Gapadol Reading Comprehension Test and the readability of four of their textbooks was measured by the Fry formula. The findings indicated that there was a mismatch between readers and their textbooks.

193 Nicholson, T.
An Anatomy of Reading: a Guide to the Understanding of Reading Problems
Auckland, NZ: Martin Educational (1982)
Discusses the typical patterns of development in children's comprehension of text, the methodology of commonly used readability formulas, the factors that affect readability ratings, the uses and criticisms attached to readability formulas, and presents the characteristics of the Elley, Fry and Flesch readability formulas.

194 Pirozzo, R.
'Bridging the gap between low reading ability and high text difficulty in the secondary school'
Australian Journal of Reading, 5: 4, 192-201 (1982)
Reports a study in which the reading ages of ninth graders were measured by the Gapadol Reading Comprehension Test and the readability of their citizenship education textbook was measured by the Fry formula. The findings indicated that there was a mismatch between the readers and their textbook, and recommended that the content of the textbook be rewritten.

195 Wagner, G.
'Using readability formulas in the classroom'
Set, 1, item 13 (1981)
Discusses the use of teacher estimates, direct assessment and prediction formulas as means for estimating prose readability, compares the practicality of various readability formulas for teacher use, and describes the development of a computer-based program at the New Zealand Council for Educational Research for calculating Flesch scores.

196 Wishart, E. and Smith, J.L.
'Understanding of logical connectives in history'
Australian Journal of Reading, 6: 1, 19-29 (1983)
Reports a study in which a sample of 216 students in British schools was tested by techniques of cloze procedure and sentence completion on their use of logical connectives selected from a history textbook. The results were compared to the findings of a reported study using a sample of Australian students.

2.1.3 Treatment of Minorities and Women

197 Anderson, J. and Yip, L.
'Are sex roles represented fairly in children's books? A content analysis of old and new readers'
Unicorn, 13: 3, 155-161 (1987)
Reports a content analysis intended to identify changes occurring in the representation of sex roles during the intervening period in two series of basal reading materials for the lower primary level, one published in 1966 and the second in 1980.

198 Bradley, D. and Mortimer, M.
'Sex role stereotyping in children's picture books'
In D'Urso, S. and Smith R.A., *Changes, Issues and Prospects in Australian Education*
St Lucia, Qld: University of Queensland Press, 194-202 (1978)
Reports a study of sex-role stereotyping in a sample of widely used children's picture books, especially in characterisations, occupations and behaviours.

199 Browne, J.
'Gender bias in physical education textbooks'
The ACHPER National Journal, 127, 4-7 (1990)
Reports a content analysis of sex bias in the texts and illustrations of five physical education textbooks widely used in Australian secondary schools. The findings showed a ratio of three male representations to one female representation in both texts and illustrations. Also includes responses to the analysis by two of the textbooks' authors.

200 Christie, F.H.
'Woman in school texts'
Education News, 15: 4 & 5, 46-49 (1975)
Analyses the representation of female roles in textbooks used in Australian schools during the late nineteenth century.

201 Cope, B.

Racism, Popular Culture and Australian Identity in Transition: A Case Study of Change in School Textbooks since 1945
(Social Literacy Monograph Series No. 34)
Annandale, NSW: Common Ground Publishing (1987)
Reports a content analysis of 630 textbooks, widely used in Australian schools between 1945 and 1985, intended to identify changes occurring in the representation of racism, popular culture and Australian identity during the intervening period. The findings reflected a change from an assimilationist to a multicultural perspective.

202 Cope, B.
'Racism in textbooks: from assimilation to multiculturalism'
Education Links, 33, 11-13 (1988)
Reports a summary of item 201.

203 Cope, B.
'A textbook case: teaching Australian history, from assimilation to multiculturalism'
Teaching History, 22: 2, 16-20 (1988)
Reports a summary of item 201.

204 Crago, H.
'Sexism, literature and reader-response: a reply to Christine Nicholls'
Orana, 17: 4, 159-162 (1981)
Disputes the interpretation of the effects of sexism in supplementary reading materials presented in the article, 'Sexism and children's literature: a perspective for librarians'.

205 Freebody, P. and Baker, C.D.
'The construction and operation of gender in children's first school books'
In Pauwels, A. (ed.) *Women and Language in Australian and New Zealand Society*
Mosman, NSW: Australian Professional Publications, 80-107 (1987)
Reports the results of a content analysis of 163 basal and supplementary reading materials for bias in the language used for male and female references, expressive words, depictions of home and family life, gender relationships and conversational exchanges.

206 Gilbert, P. and Rowe, K.
Gender, Literacy and the Classroom
Carlton South, Vic: Australian Reading Association (1989)
Reviews research findings on sex bias in basal reading materials used in Australian schools, analyses sex bias in two literature-based reading programs, supplementary reading materials and children's writings, and discusses ways of countering bias in materials.

207 Gizycki, K.
'Sexism in mathematics texts'
Curriculum and Research Bulletin, 11: 4, 140-143 (1976)
Reports a content analysis of gender references in five mathematics textbooks used in Victorian schools. The findings indicated that females were underrepresented in such references.

208 Healy. P. and Ryan, P.
The Female Image: Sexism in Children's Books
Melbourne, Vic: Australian Union of Students (1975)
Reports a content analysis of sexism in basal reading materials used in fourteen New South Wales primary schools in terms of role type, role direction, role orientation, role knowledge and motivation of characters' behaviour.

209 Hoppe, A.
'Goodbye Dick and Jane: hello, Chiang and Chiquita Applebaum'
Educational Magazine, 32: 5, 32-34 (1975)

Offers a humorous examination of bias in instructional materials from a publisher's viewpoint.

210 Ives, R.
'The maleness of science'
Australian Science Teachers Journal, 30: 1, 15-20 (1984)
Discusses the way that the pervading male representations in the style, content and illustrations in science textbooks influence females negatively towards the study of science.

211 James, J.
'Children's books and sex roles'
Quest, 17, 30-34 (1975)
Reports a survey of sex role stereotyping in more than 400 reading materials for the primary level in a school library collection, and cites examples of both girl-oriented and boy-oriented characteristics in a selection of the materials.

212 Kociumbas, J.
'"What Alyce learnt at nine": sexuality and sex roles in children's literature to 1914'
History of Education Review, 15: 2, 18-36 (1986)
Discusses bias in the representation of sexuality and sex roles in reading materials for children published in Australia before 1914.

213 Maxwell, A.
1976 'Sexism in fairy tales of Andersen and Perrault: a study'
Children's Libraries Newsletter, 12: 1, 20-30 (1976)
Reports the findings of a study on sexist stereotypes in a sample of reading materials for young children.

214 McVitty, W.
'Australia through its children's books'
Social Education, 48: 6, 449-450 (1984)
Discusses how reading materials, published in Australia, reflect stereotypes of Australian society.

215 Mortimer, M.
'Sex stereotyping in children's books'
Australian Journal of Early Childhood, 4: 4, 4-8 (1979)
Reviews the research literature on sex stereotyping in the characterisation of reading materials for young children, and recommends that sexism can be counteracted by three techniques: communication with authors; applying evaluative criteria to identify bias; and alerting teachers.

216 Mortimer, M. and Bradley, D.
'The image of women and girls in children's books'
Australian Library Journal, 28: 6, 87-93 (1979)
Discusses issues relating to bias in the representation of females in reading materials for young children through review of research literature.

217 Nicholls, C.
'Sexism and children's literature: a perspective for librarians'
Orana, 17: 3, 105-111 (1981)
Discusses specific instances of sexism in reading materials for young children and recommends guidelines for librarians to implement in order to extend the range of non-sexist materials in collections.

218 Office of the Commissioner for Community Relations
Let's End the Slander: Combatting Racial Prejudice in Teaching Materials

Canberra, ACT: Office of the Commissioner for Community Relations (1979)
Summarises previous research studies regarding the depiction of Australian Aborigines in instructional materials used in Australian schools. Proposes a campaign to combat racism in instructional materials based upon disseminating findings, sensitising community groups, establishing consultative processes with minority groups, developing specific programs for teacher education and curriculum reform, and producing unbiased instructional materials.

219 Queensland Department of Education
What's Being Written About Us: A Background Paper Discussing Materials on Aborigines and Islanders
North Quay, Qld: Queensland Department of Education (1984)
Presents an historical study of race relations between Australian Aborigines and European settlers, summarises previous research studies regarding the depiction of Australian Aborigines in instructional materials used in Australian schools, and describes the main forms bias towards Australian Aborigines takes in instructional materials.

220 Rennie, L.J. and Mottier, I.
'Gender inclusive resources in science and technology'
Australian Science Teachers Journal, 35: 3, 17-22 (1989)
Reviews research into sex bias in curriculum materials, analyses some current general science textbooks revealing that bias still exists and presents a set of guidelines to select and prepare curriculum materials which present science as a human activity.

221 Richards, P.
'Look I'm not a racist but...'
Education Links, 33, 4-26 (1988)
Describes a project, trialled at Cabramatta High School in New South Wales, to investigate racism in curriculum materials and to produce non-racist materials.

2.2 Subject Matter Content Coverage

2.2.1 Language Arts

222 Carr, J. and Huddleston, R.
The Treatment of Grammar in English Language Arts Textbooks
North Quay, Qld: Queensland Department of Education (1990)
Reports the results of content analyses of 42 language arts textbooks to determine the treatment of grammar, identifying that explanations of grammatical concepts were expressed in terms of meaning not grammar, inappropriate grammatical categories were included, a prescriptive approach was adopted, and incorrect statements and examples were given.

223 Derewianka, B.
Exploring how Texts Work
Rozelle, NSW: Primary English Teaching Association (1990)
Examines various genres of text and matches their use to appropriate teaching-learning activities for language arts programs. Analyses the curriculum contexts, focus activities, summaries of text features, and language highlights of six text-based genres: recounts; instructions; narratives; information reports; explanations; and arguments.

224 Goodrich, R.A.
'Three typical textbooks: assumptions and shortcomings'
The Teaching of English, 45, 36-41 (1983)
Analyses the teaching and learning methods presented in each of three textbooks widely used in Victoria for language arts programs, one in the early 1950s, another in the early 1960s and the last in the early 1970s, and relates their approaches to the prevailing educational philosophies of their time.

225 Hammond, J.
'Is learning to read and write the same as learning to speak?'
In Christie, F. (ed.), *Literacy for a Changing World*
Hawthorn, Vic: Australian Council for Educational Research, 26-53 (1990)
Argues that learning to read and write is a more complex and continuing activity than learning to speak, and as literacy development continues, it becomes less like learning to speak. Analyses the content of a short section of text to show that secondary school students are still developing control of the written mode.

2.2.2 Mathematics

226 Baxter, J.P. (ed.)
'The use of materials in preservice teacher education from the Reality In Mathematics (RIME) Project and The Mathematics Curriculum and Teaching Program (MCTP)'
In Baxter, J.P. (ed.),*Teacher Education Mathematics Project: A Report for the Committee to Review Australian Studies in Tertiary Education*
Bedford Park, SA: Australian Association of Mathematics Teachers, 40-67 (1988)
Contains six articles reporting the activities of trainee teachers from six institutions in evaluating materials produced in the Reality in Mathematics Education (RIME) Project and The Mathematics Curriculum and Teaching Program (MCTP) through field-tests in classrooms.

227 Fletcher, J.
'Report on the use of Careers and Mathematics materials'
In Baxter, J.P. (ed.),*Teacher Education Mathematics Project: A Report for the Committee to Review Australian Studies in Tertiary Education*
Bedford Park, SA: Australian Association of Mathematics Teachers, 71-74 (1988)
Describes the match between instructional materials produced in the Careers in Mathematics Project and a mathematics program, Applying Mathematics, used at the senior secondary level of Western Australian schools.

228 Hameston, M.
'"Nothing is but what is not": getting to grips with points, lines and planes'
Idiom, 11: 5, 12-14 (1976)
Discusses issues relating to the evaluation of textbooks, and reviews a mathematics textbook.

229 Long, T.
'The selection of materials for mathematically talented students'
Rhombus, 8: 3, 16-19 (1980)
Analyses the attributes of appropriate mathematics materials that can be used with gifted learners, and describes educational services available to gifted students in Western Australia.

230 Smart, S., Taylor, L., Johinke, S., Seidel, R., Davis, C. and Michael, M.J.
'Using mathematics books backwards'
In Boomer, G. (ed.), *Negotiating the Curriculum: a Teacher Student Partnership*
Sydney, NSW: Ashton Scholastic, 99-100 (1982)
Suggests that teachers should adapt the sequence of topics in mathematics textbooks so that students are confronted with applications rather than exercises.

2.2.3 Reading

231 Baker, C. D. and Freebody, P
'Representations of questioning and answering in children's first school books'
Language in Society, 15, 451-484 (1986)
Presents a content analysis of conversation between child and adult characters in 163

basal and supplementary reading materials used in New South Wales schools. The findings indicated that the representations of conversation compare with naturalistic research in child-adult interaction at home and in classrooms.

232 Bradley, E.
'Using literature as an alternative to reading schemes'
Journal of the School Library Association of Queensland, 16: 4, 13-15 (1984)
Describes the activities of researching, developing, implementing and evaluating a reading program at a rural primary school in Queensland, in which fictional literature replaced the use of basal reading materials.

233 Cairney, T.H.
'The purpose of basals: what children think'
The Reading Teacher, 41: 4, 420-428 (1988)
Reports a study of a sample of students in primary schools in rural areas of New South Wales on their perceptions of the purpose of reading. The findings showed that the subjects held negative perceptions towards the use of basal reading materials.

234 Cambourne, B.
'Assessing comprehension strategies using class texts'
In Unsworth, L. (ed.), *Reading: An Australian Perspective*
Melbourne, Vic: Nelson, 173-179 (1985)
Discusses issues relating to quantifying student assessments of reading comprehension arising from research being undertaken by the author.

235 Freebody, P.
'The effects of vocabulary difficulty on text comprehension: a review of research literature'
Reading Education, 6: 1, 5-12 (1981)
Reviews the findings of research studies on whether vocabulary difficulty either does or does not affect text comprehension, provides explanations offered in support of either contention, and draws conclusions from the research findings for reading instruction.

236 Furniss, E.
'Reading to learn but lost for words: the significance of text characteristics for infant school teachers'
In Unsworth, L. (ed.), *Reading: An Australian Perspective*
Melbourne, Vic: Nelson, 49-60 (1985)
Discusses how children's early literacy development is enhanced through an integrative process of experiences and reading materials.

237 Luke, A.
'Making Dick and Jane: historical genesis of the modern basal reader'
Teachers College Record, 89: 1, 91-116 (1987)
Describes the development of the Curriculum Foundation Readers or Dick and Jane series in the United States between 1935 and 1965 by examining the dominant intellectual and economic considerations of their authors and publishers.

238 Luke, A.
Literacy, Textbooks and Ideology: Postwar Literacy Instruction and the Mythology of Dick and Jane
Lewes, East Sussex: The Falmer Press (1988)
Examines the development of basal reading materials and their role in fostering the literacy of students within the Canadian educational system between 1946 and 1960.

239 Murphy, B.
'Children's literature: presenting books'
In Murray, T. and Smith, F. (eds.), *Language Arts and the Learner*

South Melbourne, Vic: Macmillan, 135-150 (1988)
Discusses teaching-learning activities that can be used to present story structure, character development, dialogue and setting of supplementary reading materials.

240 Parker, R.L. and Unsworth, L.
'Critical reading instruction'
In Husen, T. and Postlethwaite, T.N. (eds.), *The International Encyclopedia of Education*
Oxford, Eng: Pergamon Press, 2: 1120-1122 (1985)
Identifies the attributes of critical reading, a process of evaluating the validity, relevance, effectiveness, or worth of what is read according to a set of criteria. Also reviews research findings and teaching practices related to critical reading.

241 Patullo, D.
The Modern Schemes: A Guide to Selection and Use
Kelvin Grove, Qld: Reading Development Centre (1987)
Compares the main characteristics of reading materials used in the whole-language approach with basal readers used in the phonics analysis approach, and describes two approaches for using whole-language reading materials. Also specifies criteria for selecting whole-language reading materials, and evaluates five series of reading materials used widely in Australian schools.

242 Pirozzo, R.
'Making sense of textbooks'
Education News, 17: 11, 40-41 (1982)
Reports the findings of a study at a secondary school on students' reading comprehension and readability of textbooks, and recommends student involvement in the selection of textbooks.

243 Unsworth, L.
'Muddling, modelling and meddling: reading in the content areas'
Australian Journal of Reading, 5: 1, 6-18 (1981); In Unsworth, L. (ed.), *Reading: An Australian Perspective*
Melbourne, Vic: Nelson, 103-114 (1985)
Discusses the issue of mismatch between readers' skills and textual demands of reading materials and proposes a variety of teaching-learning methods to overcome mismatchs.

244 Wadelton, H.
'Knowing the script: a way to assess the good old reader'
Australian Teacher, 10, 10 (1984)
Discusses the need for teachers to evaluate basal readers and suggests guidelines.

245 Wilson, L.
'Reading schemes: who needs them?'
Australian Journal of Reading, 5: 2, 71-76 (1982)
Argues from the basis of interactive theory that reading schemes should be replaced by fictional reading materials.

2.2.4 Sciences

246 De Berg, K.C.
'The emergence of quantification in the pressure-volume relationship for gases: a textbook analysis'
Science Education, 73: 2, 115-134 (1989)
Examines the possibility that part of the problem in the teaching of physical science may lie in instructional materials. Selects a sample of chemistry and physics textbooks, and analyses them on the basis of learning theory and scientific literacy.

247 Ellyard, D.G.

'Australian studies and the education of science teachers'
In Committee to Review Australian Studies in Tertiary Education, *Papers on Science and Australian Studies* (CRASTE Paper No. 9)
Canberra, ACT: Committee to Review Australian Studies in Tertiary Education, 34-71 (1986)
Identifies the extent of subject matter on Australia in the various disciplines of science education through an analysis of its representation in instructional materials, finding that representation is greater in biology and geology than chemistry and physics. Recommends that this situation could be remedied by developing a teacher's guide.

248 Lynch, P.P. and Strube, P.
'Tracing the origins and development of the modern science textbook. Are new books really new?'
Australian Science Teachers Journal, 29: 3, 27-36 (1983)
Describes the development of physical science textbooks between 1820 and 1900, identifying four types, and concluding that today's textbooks show similarities in structural, linguistic and stylistic characteristics.

249 Lynch, P.P. and Strube, P.
'What is the purpose of the science textbook? A study of authors' prefaces since the mid-nineteenth century'
European Journal of Science Education, 7: 2, 121-130 (1985)
Reports a content analysis of the prefaces of 300 science textbooks published over a time span of 100 years, revealing changes in stated purpose from the changing view of the nature of science and science teaching to the relationship between science, religion, philosophy and politics.

250 Lynch, P.P. and Strube, P.
'Ten decades of the science textbook: a revealing mirror of science education past and present'
Journal of Science and Mathematics Education in Southeast Asia, 8: 2, 31-42 (1985)
Argues that the development of modern science education has evolved in a way that can be charted by an examination of science textbooks since their beginnings in the mid-nineteenth century.

251 Martin, J.R.
'Literacy in science: learning to handle text as technology'
In Christie, F. (ed.), *Literacy for a changing world*
Hawthorn, Vic: Australian Council for Educational Research, 79-117 (1990)
Argues that the specialist language of the natural sciences is formed through the content of science textbooks. Examines the formation of concepts from examples in textbooks for common-sense views of science, organising objects, organising processes, experiments and genres of scientific writing.

252 Polya, R.
Australian Science Text-books 1850-1939: A Bibliography
(La Trobe University Library Publication No. 31)
Bundoora, Vic: La Trobe University (1986)
Presents an historical study of the development of content coverage in textbooks used in science education between 1850 and 1939. Concludes that this development was dependent upon changes in the curricula of state departments of education during this period.

253 Prosser, M.
'Cognitive analysis of physics textbooks at the tertiary and college level'
Science Education, 63: 5, 677-63 (1979)
Reports a study, investigating the intellectual requirements of the mechanics section of a first-year college physics textbook, in which instructional and prerequisite concepts were classified in terms of intellectual skills required to understand them.

254 Prosser, M.
'Relationship between the cognitive abilities of a group of tertiary physics students and the cognitive requirements of their textbooks'
Science Education, 67: 1, 75-83 (1983)
Reports the results of a study, in which the relationship between the cognitive requirements of two chapters of a physics textbook for biology pre-med students and their ability to use prerequisite reasoning skills for its understanding was investigated.

255 Strube, P.
'Eight decades of physics textbooks: what are they saying?'
Australian Science Teachers Journal, 30: 3,40-44 (1984)
Discusses ways physics textbooks, used in Tasmanian high schools since 1900, have presented the themes of energy, matter and fields, concluding that there is a stability of expression, and superficiality and abstraction in the treatment of the topics.

256 Strube, P.
'The presentation of energy and fields in physics texts: a case of literary inertia'
Physics Education, 23: 6, 366-371 (1988)
Reports a content analysis of five physics textbooks published over an interval of 84 years on the presentation of topics on energy and fields. The findings indicated common features used by each of the authors.

257 Strube, P.
'A content analysis and explanations presented to students in physical science textbooks: a model and an example'
International Journal of Science Education, 11: 2, 195-202 (1989)
Presents a model for a quantitative content analysis of textbooks, and applies the model to analyse the language of ten physical science textbooks over a seventy year time span, revealing the persistence of language characteristics.

258 Strube, P. and Lynch, P.P.
'Some influences on the modern science text: alternative science writing'
European Journal of Science Education, 6: 4, 321-338 (1984)
Discusses the stylistic development of four types of physical science textbooks, written between 1820 and 1900, concluding that the structural, linguistic and stylistic attributes of today's textbooks have been influenced by nineteenth century textbook writing.

2.2.5 Social Studies

259 Ata, A.W.
'Moslem Arab portrayal in the Australian press and in school textbooks'
Australian Journal of Social Issues, 19: 3, 207-217 (1984)
Reports content analyses of a sample of issues from four Victorian newspapers over a five-year period between 1976 and 1980, and fifteen social studies textbooks widely used in Victorian schools for their depictions of Arab culture, Arab attitudes to the West, Arab attitudes to women, Islam, and Arab-Israeli conflict. The findings indicated that the majority of references to Arabs were negative.

260 Birchall, P. and Faichney, G.
'Images of Australia in elementary social studies texts'
The Social Studies, 76: 3, 120-124 (1985)
Reports the results of a content analysis of a sample of American social studies textbooks on the quantity and quality of information on Australia, indicating that their images do not equate with the reality most Australians experience.

261 Bryant, L.
'Geography curriculum, teaching methods and teaching materials in Victoria, 1850-1910'

Geographical Education, 3: 4, 559-576 (1980)
Presents an historical study of changes in the curriculum, instructional methods and materials used in geography education in Victorian schools between 1850 and 1910. Concludes that the quality of instructional materials improved after 1900.

262 Clarke, E.
'Australian content in school curricula: an historical view'
Quest, 40, 12-15 (1986)
Presents an historical survey of subject matter on Australia in the content of social studies syllabuses, textbooks and teachers' guides used in Queensland schools between 1860 and 1970.

263 Cope, B. and Kalantzis, M.
'Literacy in the social sciences'
In Christie, F. (ed.), *Literacy for a Changing World*
Hawthorn, Vic: Australian Council for Educational Research, 118-142 (1990)
Describes the elements of the Social Literacy Project, in which curriculum materials addressing issues of multiculturalism, sexism and Aboriginal studies have been developed for grades 4-12. Also considers how the project has attempted to resolve in a practical way the theoretical impasse between traditional and progressive curriculum in the social studies by examining the content of textbooks reflecting the respective ideologies.

264 Hoban, M.
'An evaluation of junior history textbooks'
Agora, 21: 2, 8-15 (1986)
Describes the Junior History Materials Project, in which history textbooks used in the junior secondary level of Victorian schools were evaluated with the intent to providing guidelines for developing new materials with multicultural and multilingual perspectives.

265 Noronha, L.
'The presentation of India in Australian textbooks'
Ethnic Studies, 2: 3, 80-83 (1978)
Describes the results of a study of bias in the representation of India in Australian textbooks, and discusses a typical example contained in one widely used textbook.

2.3 Ideology and Controversy

2.3.1 Ideology and Instructional Materials

266 Baker, C. D. and Freebody, P.
'"Constituting the child" in beginning school reading books'
British Journal of Sociology of Education, 18: 1, 55-76 (1987)
Reports a content analysis of how particular images of the child, as character in the books and as reader of the books, are constructed in basal reading materials.

267 Baker, C.D. and Freebody, P.
'Possible worlds and possible people: interpretative challenges in beginning school reading books'
Australian Journal of Reading, 11: 2, 95-104 (1988)
Argues that basal reading materials use different discourse structures to present either fantasy or reality. Recommends that teachers can enhance children's literacy development by taking these differences into account.

268 Baker, C.D. and Freebody, P.
Children's First School Books: Introductions to the Culture of Literacy
Oxford, Eng: Basil Blackwell (1989)

Reports a study of 163 basal and supplementary reading materials used widely in New South Wales schools, investigating the issues of their general vocabulary content, their role as agents of socialisation, the role of their authors, the discursive language of characters in the texts, the portrayal of children in the texts, and how teachers orient children to the texts through classroom talk. Concludes that in these aspects basal reading materials represent a transition between oral and literate language, thereby forming an important means of socialisation.

269 Baker, C.D. and Freebody, P.
'Talk around text: constructions of textual and teacher authority in classroom discourse'
In De Castell, S., Luke, A. and Luke, C. (eds.)
Language, Authority and Criticism: Readings of the School Textbook
Lewes, East Sussex: The Falmer Press, 263-283 (1989)
Discusses ways in which authority is assigned to teachers and textual materials in the early years of schooling.

270 De Castell, S. and Luke, A.
'Literacy instruction: technology and technique'
De Castell, S., Luke, A. and Luke, C. (eds.)
Language, Authority and Criticism: Readings of the School Textbook
Lewes, East Sussex: The Falmer Press, 77-95 (1989)
Discusses how contemporary technologies are affecting the curriculum of programs in reading and writing in terms of textual materials.

271 Freebody, P. and Baker, C.D.
'Children's first schoolbooks: introductions to culture of literacy'
Harvard Educational Review, 55: 4, 381-398 (1985)
Reports the results of a content analysis of a sample of basal and supplementary materials for beginning readers used in New South Wales schools, and discusses ways in which beginning reading materials present cultural perspectives to young children.

272 Gilbert, R.
'Text analysis and ideology critique of curricular content'
In De Castell, S., Luke, A. and Luke, C. (eds.)
Language, Authority and Criticism: Readings of the School Textbook
Lewes, East Sussex: The Falmer Press, 61-73 (1989)
Traces developments in ideological critique through analysis of text by describing approaches from content analysis to structuralism, and considers current issues and future directions.

273 Kirk, D.
'School knowledge and the curriculum package-as-text'
Journal of Curric::lum Studies, 22: 5, 409-425 (1990)
Argues that multimedia curriculum packages affect the construction of school knowledge by examining their use as the key form that curriculum materials took during the curriculum reform movement and post-reform period, proposes a framework for studying the multimedia curriculum package as text, and applies the framework in a study of a material, *Daily Physical Education Program*, used in Queensland schools.

274 Kress, G.
Linguistic processes in sociocultural practice
Waurn Ponds, Vic: Deakin University Press (1985)
Argues that the forms and meanings of textual materials are determined by discourses, systems of meaning arising from the organisation of social institutions, and genres, formal conventions arising from social interactions. Examines this contention in terms of the role of textual materials in education by analysing the linguistic processes, ideology and aspects of change in examples of text.

275 Luke, C., De Castell, S. and Luke, A.
'Beyond criticism: the authority of the school textbook'
In De Castell, S., Luke, A. and Luke, C. (eds.)
Language, Authority and Criticism: Readings of the School Textbook
Lewes, East Sussex: The Falmer Press, 245-260 (1989)
Examines the constraints in communication imposed by textbooks within the context of the classroom as indicated by their mode of discourse, techniques of text construction, material quality and institutional practices that circumscribe them.

276 Olson, J.K.
'School inc: corporate materials in schools'
The Australian Administrator, 9: 6, 1-4 (1988)
Discusses the way in which the values of corporatism intrude into schools through the instructional materials used in classrooms.

277 Seddon, T.
'Con-texts'
Radical Education Dossier, 21,37-39 (1983)
Describes the international dispute in 1982 over accounts of Japanese history in textbooks highlighting implicit militarism, and examines the militaristic content of Australian textbooks, arguing that this must be replaced with a pacifist ideology.

278 Seddon, T.
'Politics and curriculum: a case study of the Japanese history textbook dispute 1982'
British Journal of Sociology of Education, 8: 2, 213-226 (1987)
Examines the international controversy which erupted in 1982 over state authorised changes to Japanese history textbooks in terms of political, economic and social dynamics.

279 Williamson-Fien, J.
The Japanese textbook crisis'
The History Teacher, 38, 52-77 (1985)
Examines the political aspects of the international dispute in 1982 between Japan and its neighbours, China and South Korea, over the portrayal of Japanese history in Japanese textbooks.

2.3.2 Controversy and Censorship

280 Anderson, L.J.
'What price realism? or the selection of adolescent literature dealing with controversial topics in the post-primary school'
School Library Bulletin, 10: 2, 37-46 (1978)
Discusses guidelines for selecting reading materials dealing with controversial topics, such as violence, death, drugs, family conflict, adolescent development, sexual issues, handicaps and war. A bibliography of materials, identifying controversial topics in specific materials, is appended.

281 Dayman, S.
'Children's books: a burning issue'
Education (NSW), 66: 17, 12-13 (1985)
Discusses issues relating to the censorship of reading materials as represented by the views of Australian publishers and librarians.

282 Dellit, J.
'Censorship or selection?'
Idiom, 1, 7-9 (1986)
Discusses issues relating to the censorship of instructional materials and considers the role of the teacher in censoring controversial materials.

283 Duhs, L.A.
'MACOS/SEMP debate in Queensland, 1978: some central issues'
Australian Journal of Education, 2: 3, 270-283 (1979)
Describes the main issues surrounding the involvement of the Society to Outlaw Pornography (STOP) and the Committee Against Regressive Education (CARE) in the censorship of instructional materials produced in the social studies programs, Man: A Course of Study (MACOS) and Social Education Materials Project (SEMP), in Queensland during 1978, and analyses the standpoints of the two opposing groups contending that their arguments were deficient.

284 Marsh, C. and Stafford, K.
'Decision makers and influences on curriculum'
In Marsh, C. and Stafford, K., *Curriculum Practices and Issues*
Sydney, NSW: McGraw-Hill Book Co., 160-196 (1984)
Analyses the roles of various interest groups in influencing the curriculum. Includes as a case study a review of the instructional material, Man: A Course of Study (MACOS), and an account of its field-trialling and adoption in Queensland schools during 1973 and its subsequent censoring in 1978 following a campaign by the Society to Outlaw Pornography (STOP) and the Committee Against Regressive Education (CARE).

285 McGregor, P.
'Is our school curriculum out of control?'
Institute of Public Affairs Review, 39: 2, 23-25 (1985)
Argues that some instructional materials used in Australian schools promote the views of radical minority groups.

286 O'Donnell, D.
'The churches and SEMP'
ACES Review, 7: 4, 9-13 (1980)
Discusses reported evidence on support offered by religious denominations for the use of curriculum materials produced by the Social Education Materials Project (SEMP), following their censorship by the state cabinet in Queensland during 1978.

287 Singh, M.G.
'"School kit ban is defeated": a quasi-historical case study of curriculum innovation'
Journal of Intercultural Studies, 8: 2, 50-68 (1987)
Describes a case study of the Multicultural Education Curriculum Project, sponsored by the Queensland Department of Education, highlighting the controversy arising from an attempt by the Committee Against Regressive Education (CARE) during 1983 and 1984 to censor dissemination of materials developed in the project, and consequent developments occurring in multicultural education in Queensland.

288 Smith, R.A. and Knight, J.
'MACOS in Queensland: the politics of educational knowledge'
Australian Journal of Education, 22: 3, 225-248 (1978)
Describes the controversy over the use of curriculum materials from the social studies program, Man: A Course of Study (MACOS), in primary schools in Queensland during 1977. Also reports the results of a content analysis of fundamentalist writings by both the Committee Against Regressive Education (CARE) and the Society to Outlaw Pornography (STOP), and materials from MACOS, showing the opposing writings and materials present contradictory attitudes.

289 Smith, R.A. and Knight, J.
'Political censorship in the teaching of social sciences: Queensland scenarios'
Australian Journal of Education, 25: 1, 2-23 (1981)
Describes the activities of the Society to Outlaw Pornography (STOP) and the Committee Against Regressive Education (CARE) in censoring instructional materials in Queensland including those from the social studies programs, Man: A Course of Study

(MACOS) and Social Education Materials Project (SEMP). Also analyses the content of these social studies materials perceived to be dangerous, and poses scenarios for future development of this issue in Queensland.

2.3.3 Evolution Theory and Creationism

290 Parker, F. and Parker, B.
'Behind textbook censorship'
Education and Society, 6: 1 & 2, 111-116 (1988)
Describes the activities of People for the American Way in monitoring censorship objections brought by fundamentalist Christians in the U.S.A., citing current cases, and analyses issues in textbooks to which these people object.

291 Sperring, T.
'The evolution of "creation science"'
The Forum of Education, 45: 1, 23-35 (1986)
Describes both the development of the creationist movement in the United States and its influence upon censoring textbooks, and the activities of the Creation Science Foundation in Queensland in influencing decision-making on balanced treatment of the evolution-creation issue in education.

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Social Education, 47: 2, 102-109 (1983)

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Hillsdale, NJ: Erlbaum Associates (1984)

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Harvard Educational Review, 49. 361-186 (1979)

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Social Studies, 21, 36-48 (1986)

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'Readability formulas may be dangerous to your textbooks'
Educational Leadership, 42: 7, 18-20 (1985)

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Education Digest, 47: 3, 2-5 (1981)

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Canberra, ACT: Australian Government Publishing Service (1989)

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'Demythologizing the textbook president: teaching about the president after Watergate'
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'The dismal project: the portrayal of disability in basal readers'
Reading Improvement, 18, 42-47 (1981)

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'Effect of rewritten content textbook passages on middle grade students' comprehension of main ideas: making the inconsiderate considerate'
Journal of Reading Behavior, 18: 1, 1-21 (1986)

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Journal of Curriculum Studies, 18: 3, 299-309 (1966)

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Educational Studies, 12: 1, 35-41 (1981)

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'What kids want to read'
The National Elementary Principal, 61: 3, 6-7 (1982)

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'Censorship and "The Lottery"'
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